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Application Development Trends

A 101communications Publication

FEBRUARY 2005
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MIXED SIGNALS

DOMINO OR WORKPLACE?

End users wonder whether
to stay put or migrate

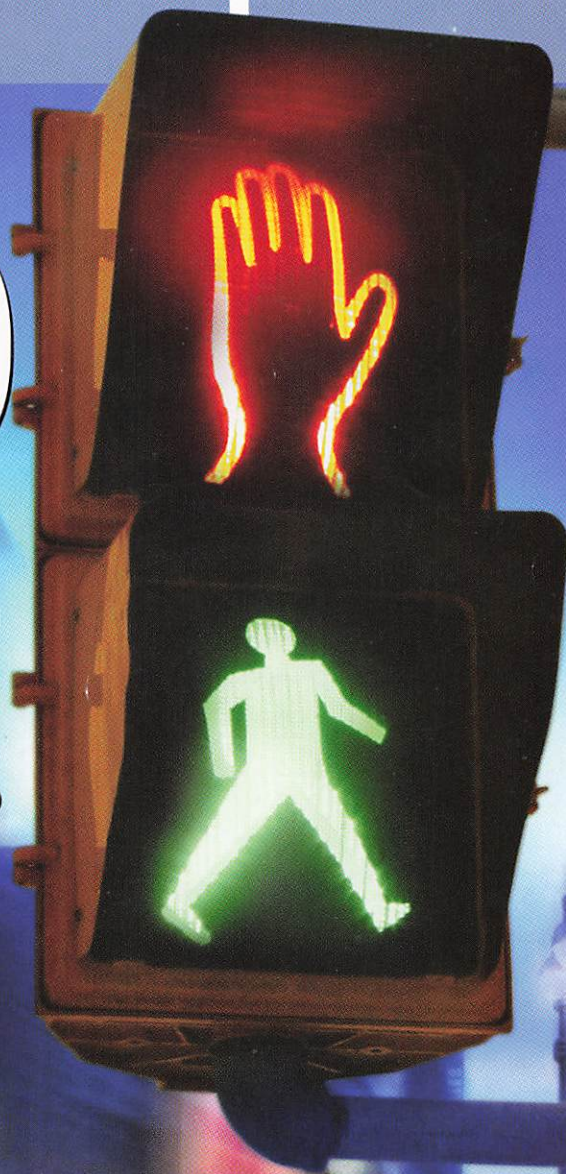
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Coping with patches

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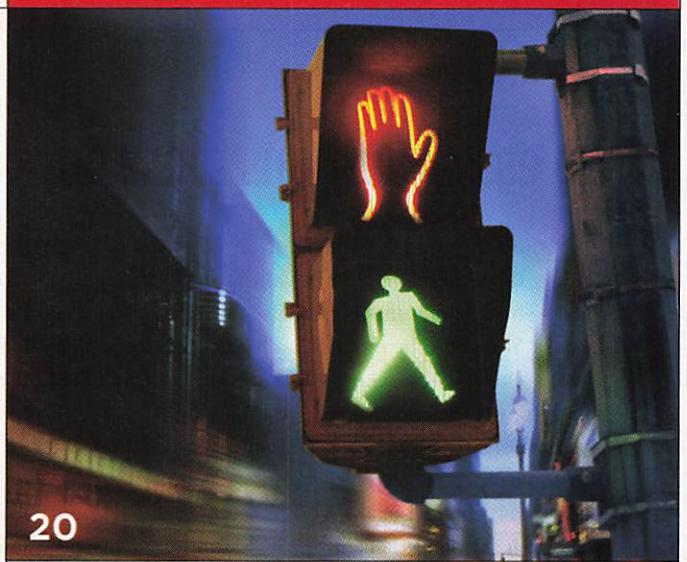
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EDITORIAL

REMARKS FROM THE EDITOR-IN-CHIEF BY MICHAEL ALEXANDER

No easy questions these days

You're standing on the corner of a busy street, cars blowing by you nonstop. The Walk/Don't Walk sign is broken; and both the go/no-go signals are brightly lit. What do you do? Stand on the corner and hope the light will change so you can cross in relative safety, or do you run like hell and hope you don't get mowed down?

This month's issue is about making tough choices that can cost plenty if you happen to make the wrong decision.

IBM has been talking up Workplace, the messaging and collaboration platform it announced in 2003, writes **Stephen Swoyer**. Meanwhile, Notes/Domino customers are beginning to suspect IBM will abandon the platform, leaving them without support or access to product innovation.

IBM adamantly says Notes/Domino won't be scrapped, although it concedes Domino and Workplace eventually will converge into one product. That leaves longtime Notes/Domino customers wondering if they should stick tight and protect their investment or migrate to Workplace, which is clearly the future for IBM.

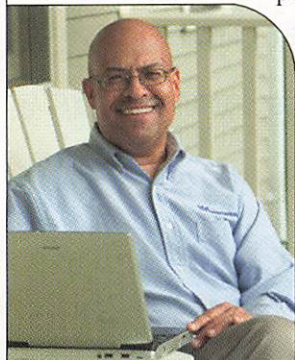
Alan Joch's feature looks at another tough choice IT shops are mulling over: Should they stick with costly commercial software with support or move to no-cost, open-source software with little or no support? Joch, who is new to these pages, spoke to IT pros who have not only deployed open source, but also have made it pay off by sharing their code.

IT shops are giving software as a service, and its compelling value proposition, a close look these days, writes **Steve Ulfelder**, who is also writing for ADT for the first time. However, SaaS offers little to world-class enterprises because of their extensive investment infrastructure and apps.

Whether to apply the latest patch from a software vendor can often be a tricky question. Some patches, to close a security hole, for example, are absolutely essential. But others may actually do more harm than good. **Johanna Ambrosio** looks at how some IT shops are managing the patch problem.

Finally, frequent contributor **John Waters** investigates how some enterprises are attempting to get unstructured data under control. The experts say more than 80 percent of data that companies generate does not fit into the neat little cells of a database. Getting that information under control is no longer an option, however.

If you can't think of a business reason to do it, the federal government has some ideas.



Michael Alexander

malexander@adtmag.com

Application Development Trends

Editor-in-Chief	Michael Alexander malexander@adtmag.com
Executive Editor	Rick Saia rsaia@adtmag.com
Senior Editor, Print	John S. Webster jwebster@adtmag.com
Senior Editor, Web	Rich Seeley rseeley@adtmag.com
Managing Editor	Christina C. Schaller cschaller@adtmag.com
Art Director	Michele Singh
Graphic Designer	Graye Smith
Correspondents	John K. Waters john@watersworks.com
Contributing Columnists	Tony Baer Wayne Eckerson Uche Ogbuji
Contributing Writers	Stephen Swoyer Alan Joch Steve Ulfelder Johanna Ambrosio L.J. Cohen
Publisher	Sheryl L. Katz
Marketing Director	Tracy S. Cook
Circulation Director	Evelyn Adenau
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Contact Us: www.adtmag.com

Article submissions and letters to the editor:
Michael Alexander, Editor-in-Chief, 600 Worcester Rd., Ste. 301,
Framingham, MA 01702, 508-875-6644 ext 32, malexander@adtmag.com

Editorial inquiries:
Christina Schaller, Managing Editor, 600 Worcester Rd., Ste. 301,
Framingham, MA 01702, 508-875-6644 ext 15, cschaller@adtmag.com.

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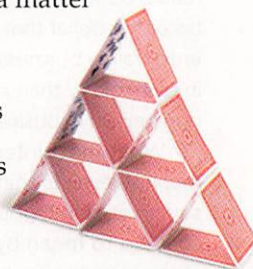


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Not all IT's fault

I FOUND Uche Ogbuji's column ("Be humble, not imperial") in the December issue thought-provoking. It's hard to argue with the characterization of the reputation of IT at most firms in the first half of the column. I do think, however, that the business side has contributed to the situation by being mostly as guilty of not learning about the capabilities and limitations of IT as IT is always accused of being regarding business knowledge.

As an IT professional, I do find it offensive whenever I read a business person stating his or her belief that it is easier to train a business person in technology than a technology person in business.

What most interested me, however, is that, without saying so, Mr. Ogbuji seemed to mean by "imperialistic data design" the fundamental principles that stem from the mathematical roots of the relational model. While I can't believe he meant to suggest that heretofore accepted best practices in data modeling, such as normalization and logical/physical separation, are wrong-headed or obsolete, that seems to me the only logical conclusion to be derived from his statements.

I don't know what the answer is. It is true that "imperialistic data design," while certainly responsible for enabling the widespread, successful use of relational database technology we take for granted today, does often seem to lead to non-agile states of affairs. I think



we are still a long way from being able to apply IT to support business agility with the reliability and routine that are taken for granted in other engineering fields. IT inherently deals in abstractions and has correspondingly much higher complexity and chaos. As long as the pace of business change remains as fast as it is, I think the application of IT to business support will always be sub-optimal by definition.

—Mark Frawley
mark.frawley@
citigatehudson.com

Value-added analysts

I WAS GLAD to see an article on the relationship between business and IT in the December issue ("The IT-business relationship moves into a new phase," by Wayne Eckerson). I agree that there is a problem in many organizations because the two groups do not understand each other's work. I read eagerly toward the solution that I was expecting, but was disappointed when Mr. Eckerson discounted the solution of the business analyst. Although the role does require a unique, knowledgeable individual, as Mr. Eckerson points out, these individuals are not rare. There are hundreds, if not thousands, of us. Most Fortune 500 companies have positions for people acting as liaisons between business and IT.

The International Institute for Business Analysis (www.IIBA.com) is creating a body of knowledge for the industry. The IIBA has published a description of the

role and is opening local chapters in North America.
—Barbara A. Carkenord
VP of Training
B2T Training L.L.C.

Bottom line on TopCoder

REGARDING THE ARTICLE published in the January issue, I'd like to clarify a few misrepresentations regarding the data collected by TopCoder.

First, the article, "The world's best coders are ..." (Page 31) states: "Based on results from participation in the company's frequent algorithm and software writing competitions, the company currently ranks an American, with a score of 2768.80, as the best coder in the world." This statement is incorrect; the score refers to an aggregate country rating, not an individual coder's. (See related story, Page 10.)

The next sentence further implies that the additional countries listed in the last paragraph are individuals, rather than each being a representation of the country as a whole.

The paragraph concludes with the most puzzling statement of all: "However, that national triumph for the U.S. is balanced by data on average performance among TopCoder contest participants. By

that measure, programmers from the Republic of Korea are at the top of the top 10 ranking and the U.S. doesn't even place on the list!"

It is true that TopCoder does record and publish statistics that measure the performance of both individuals, as well as the countries they represent. However, the data that does, in fact, represent "average performance among TopCoder contest participants" places the U.S. at the top of the list, rather than below the 10th spot as the article implies.

In addition, I am at a loss to explain the inclusion of the Republic of Korea, since its aggregate performance is not among the top 10 represented on TopCoder's Web site.

TopCoder specializes in running various types of programming competitions with one of the goals being to utilize the statistical data that is captured to measure relative merit of individuals and groups of individuals. Our rating system is at the core of our business and we certainly take issue when that data is significantly misrepresented.

—Mike Lydon
Chief Technology Officer
TopCoder Inc.

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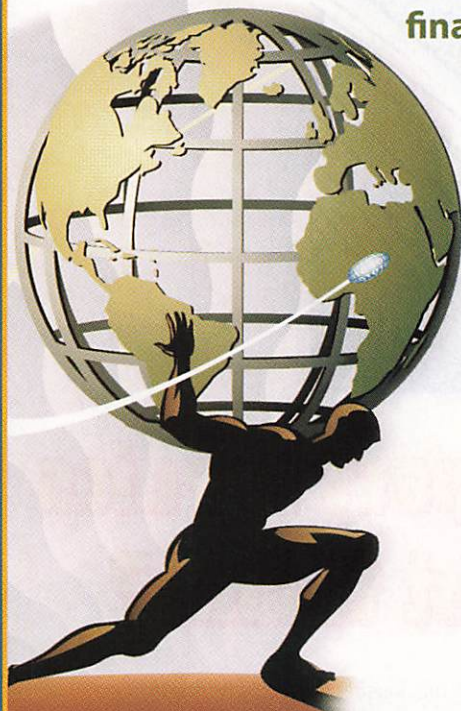
Letters to the Editor
Application Development Trends
600 Worcester Road, Suite 301
Framingham, MA 01702

Phone: 508 875-6644
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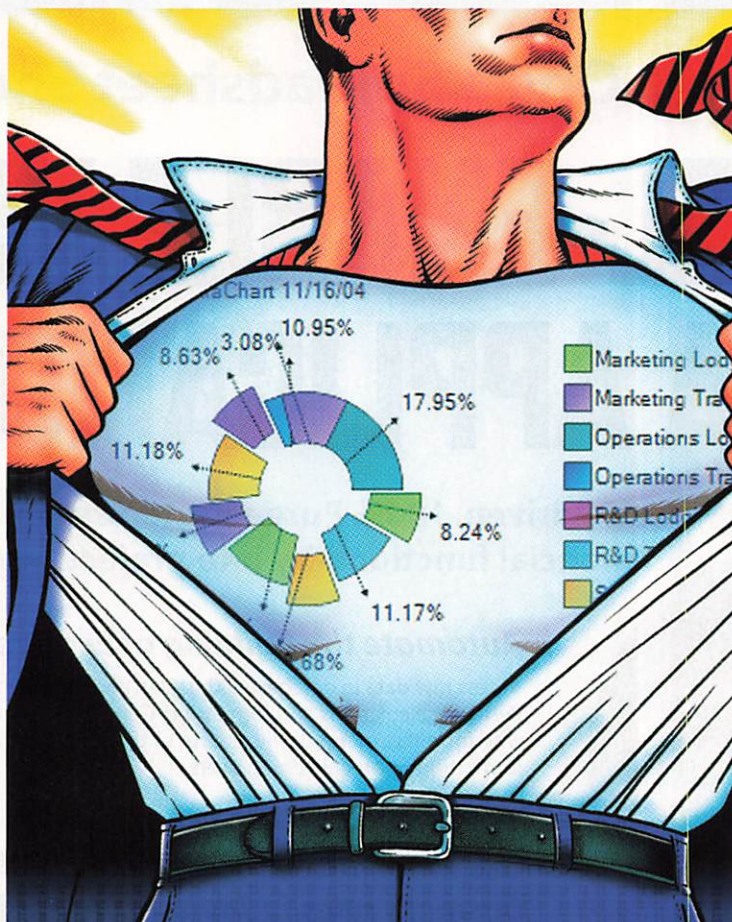
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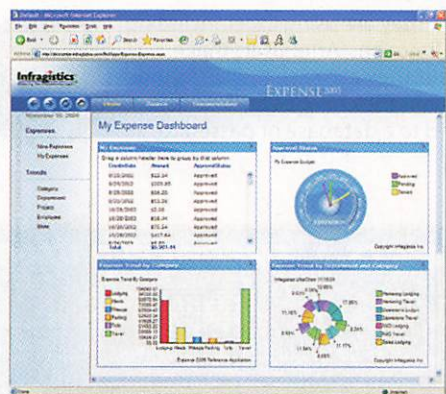
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INSIGHTS, ANALYSIS AND STUFF FOR MANAGERS

REPORTING BY MICHAEL ALEXANDER, RICK SAIA, JOHN S. WEBSTER, AND ALAN R. EARLS

Sarbox gives security a nudge

Business usually recoils at government meddling, but federal laws and regulations, especially the Sarbanes-Oxley Act, may actually be helping information security efforts.

Sarbanes-Oxley was enacted in 2002 to curb corporate wrongdoing in the wake of a number of business scandals. Today, it appears to be paying dividends for information security practices.

Sarbanes-Oxley is a top-of-mind issue for information security experts. For instance, a survey by security vendor Red-Siren found two-thirds of computer security professionals believe compliance with Sarbox and other fed regs has made their networks more secure, even though 62 percent of the more than the 300 surveyed say they're spending more time complying with those regulations.

Little wonder, then, that experts predict a rise in security spending this year. They also predict security attacks over the Internet will also increase.

That's why organizations such as Geisinger Health System, a Pennsylvania health care provider, are always on guard against security attacks and stress safe computing practices to its employees. At the same time, Geisinger must comply with the mandates of the Health Insurance Portability and Accountability Act, which the government passed in 1996 to help safeguard patients' health information.

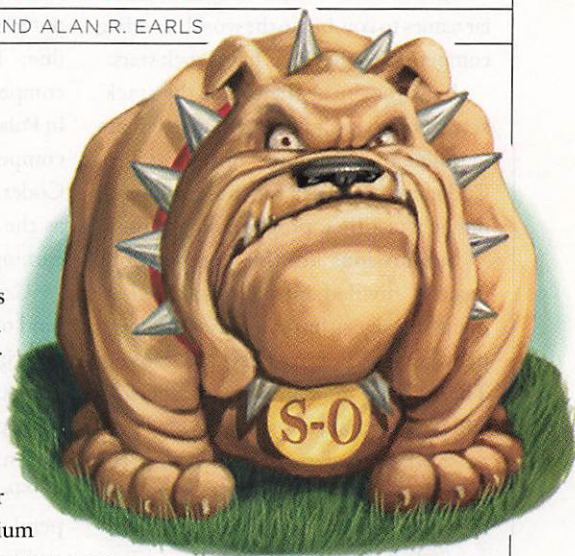
Jaime Chanaga, Geisinger's chief information security officer, says HIPAA is "one of the ingredients" that has helped boost security efforts in his company and industry.

Robert Charette, a senior consultant at Cutter Consortium who directs its enterprise risk management and governance advisory service, sees more IT dollars going to security, along with business continuity management and IT operational risk issues. As many public companies deal with Sarbox, he adds, the law "will continue to cast a shadow on IT spending, as new systems will [be needed] to comply with its requirements."

Part of the issue, Charette continues, is that with Sarbanes-Oxley, a company must make sure that its transactions are secure. "They have to because if you can't show that your transactions are secure, then your financials are suspect," he says.

In a recent report, *CIO 2.0, The Changing Role of the Chief Information Officer*, Deloitte Consulting says regulatory compliance is becoming more complicated, especially with matters related to business information. However, Deloitte says IT should look beyond compliance for opportunities to better leverage security and risk management "into better, more efficient operations, stronger brands and enhanced revenues."

—Rick Saia



HEADS UP!

Blog readership in the U.S. rocketed 58 percent in 2004 to an estimated 32 million, close to 11 percent of the population, according to a November survey of nearly 1,900 Internet users by the Pew Research Center's Internet & American Life Project. As the use of blogs becomes more widespread, more corporations may broaden their use of them, says Michael Schrage of the MIT Media Lab.

"Blogs and wikis, if they're done with craft and care, will supersede FAQs and traditional documentation" that have often held back effective application deployment, Schrage says.

ILLUSTRATION BY SCOTT POLLACK

The kings of coding

"Tomek" and "Pops" may be unfamiliar names to you, but in the world of coding competitions, they're as big as rock stars.

Now they're at the top of the stack, according to their peers who participate in online programming contests at TopCoder.com, a mecca for those willing to publicly test their programming chops.

Submissions to the competitions (usually divided into design/development and algorithm categories) undergo peer review before they are ranked. There's prize money and camaraderie—and participants love it.

"At the very core of what we do is the belief that competition is the best method of evaluating ability and delivering quantifiable results," says TopCoder's president, Rob Hughes.

"Tomek," a.k.a. Tomasz Czajka, a Ph.D.

candidate in com-

puter science at Purdue, began participating in online competitions when he was in high school in Poland. He entered his first TopCoder competition in 2003 and won the "TopCoder Open" two years running, as well as the TopCoder Collegiate Challenge, earning about \$98,000.

Czajka says he was "just looking for any kind of programming contest." But since entering TopCoder, the adrenaline rush of competition has become habit forming. "The problems are so interesting so it is very stimulating," he adds.

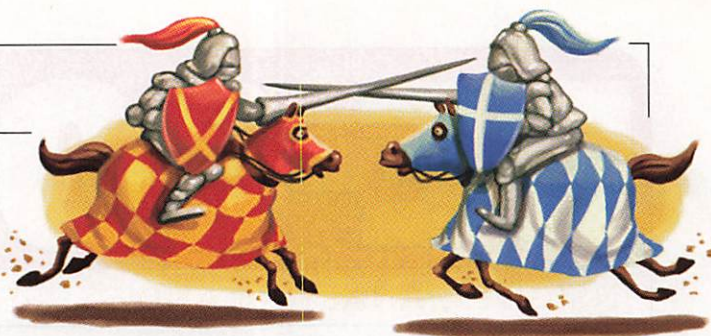
"Pops," a.k.a. Tim Roberts, an independent consultant in the Chicago area, and TopCoder member since 2001, focuses on design/development. Competing on TopCoder not only helps pay bills; his con-

sistently high rankings also give him a strong reference for potential clients.

Mike Morris, TopCoder's VP of software development, says the company has nearly 50,000 members in 160 countries, and about 1,500 compete weekly in online coding rounds.

For Roberts, TopCoder isn't just fun and games; it represents the future. "I have been very active on the design side, trying to improve the process over the years," he says. "I find that many companies talk about reuse but most don't really do it." He believes TopCoder shows it can be done efficiently. "The stuff they develop is [of] much higher quality than you'll find in most companies."

—Alan R. Earls

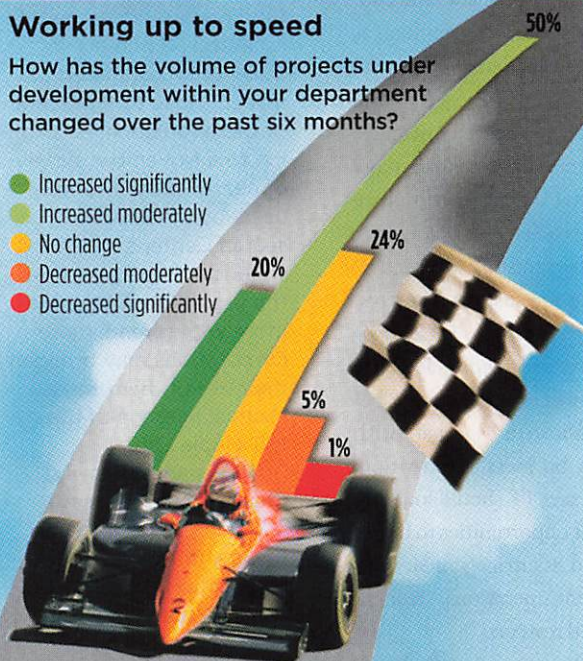


Fact Matter

Working up to speed

How has the volume of projects under development within your department changed over the past six months?

- Increased significantly
- Increased moderately
- No change
- Decreased moderately
- Decreased significantly



SEVENTY PERCENT OF ENTERPRISE IT DEVELOPMENT SHOPS ARE KEEPING BUSY WITH NEW PROJECTS, ACCORDING TO A NOVEMBER SURVEY BY EVANS DATA. THAT'S UP FROM THE 65 PERCENT EVANS CITED IN ITS PREVIOUS SURVEY EARLY IN 2004.

NEXT NEW THING

Will IT tune into RFID this year? Two research firms think so, citing increased spending to scale up and integrate the supply-chain technology. ABI Research of Oyster Bay, N.Y., says most of the 137 companies that sought to meet buyers' RFID mandates last year at least made the effort but spent less than the \$2 million to \$3 million some analysts had predicted. This year looks to be different, ABI says. "We are seeing companies increase their RFID budgets three to five times," ABI's Erik Michielsen says.

Increased spending may not translate into many opportunities for IT, however. IDC says two-thirds of organizations that considered RFID solutions last year said they would prefer using external help in implementing them. As a result, services firms are investing more in personnel, marketing and partnerships because they foresee increasing demand for services through 2008, the research firm says.

RCI Finance SA Slashes Costs and Streamlines Financial Processes with Hyperion Business Intelligence Solutions on Linux

The embrace of Linux by corporate IT is driven by several factors: price/performance, security, reliability and the adaptability of the open source model. Ultimately, however, the business value that an OS can deliver to enterprise customers will always be linked to the business value of the applications that run on it. Thus, if Linux remains simply an economical platform for web servers, database servers and other utility infrastructure, it will not rise to challenge the proprietary platforms on which today's mission-critical enterprise solutions are built. That's about to change. With the introduction of Hyperion Business Intelligence Solutions on RedHat Enterprise Linux, Hyperion is pioneering the delivery of truly strategic business solutions on open source OS. This is enabling customers like RCI Finance SA to apply the power and economy of Linux where it counts: to a processing intensive application where speed, scalability and rock-solid reliability are crucial to business performance.

The RCI Finance SA Story

In business for more than 40 years, RCI Finance SA, the finance division of Renault has continued to maintain a market penetration rate of 30+ percent. Because of its need to process and analyze voluminous amounts of data, it is critical that RCI Finance SA have an easy-to-use and cost-effective technology system in place.

Lowering Costs with Linux

In 2003, RCI Finance SA began replacing its UNIX servers with Linux. At the same time, the company sought to upgrade Hyperion Business Intelligence/SQR environment to the Linux-enabled SQR 8.1.

According to Patrick Leplat, IT manager at RCI Finance SA, since this conversion the company has already realized cost savings of US \$40 thousand per year. "We are very pleased with the value of Hyperion SQR running on Linux. We moved to Linux because it is a cost-effective platform to deploy broadly. These cost-savings are important to us and the superior price/performance ratio of Hyperion SQR for Linux is delivering measurable value."

Hyperion SQR – A Proven Workhorse

RCI Finance SA first launched Hyperion SQR in 1996 when its existing Crystal Reports system no longer met the company's demanding reporting requirements. Today, RCI Finance SA relies on Hyperion SQR for reporting against its Sybase datamart, which contains critical customer data collected from multiple sources. Hyperion SQR reports transform volumes of data into as many as 150 reports, accessed by 50 users throughout the organization. More than 30 of these reports are run on a daily basis.

With Hyperion SQR, RCI Finance SA automatically generates and prints more than 200,000 invoices from the Sybase datamart. By eliminating numerous manual steps in the invoicing process, Hyperion SQR has freed up RCI Finance SA's IT and finance teams to perform higher-value tasks. The Hyperion BI solution, SQR for Linux, has created real value for RCI Finance SA. "SQR is a proven solution that we've been using for more than eight years to run a myriad of reports throughout our organization. It's reliable, stable and scalable to meet our needs now and well into the future. It's powerful enough to run complex reports, yet easy-to-use for even occasional users," concludes Leplat.



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OUTSIDE THE BOX

BRUSH AWAY WIRELESS GAPS

WORRIED ABOUT THE SECURITY of your wireless laptops, routers and other devices? Force Field Wireless manufactures an additive for standard interior wall paint that it says will block the transmission of data over devices using 802.11a/b/c and Bluetooth.

DefendAir Radio Shield Paint Additive helps block wireless network interference and shields wireless data from escaping through walls, ceilings, and other surfaces. When the additive is mixed into paint and applied, the painted surface dries to a tightly packed layer that reflects up to 90 percent of a radio transmission, the company claims. A container of DefendAir Radio Shield Paint Additive, which the company sells through its Web site for about \$34, treats up to one gallon of paint.

Of course, ADT should mention that if you really care about the confidentiality of data that travels over your wireless networks, find some other way to transmit it, but you already knew that. For more information, go to www.forcefield-wireless.com.

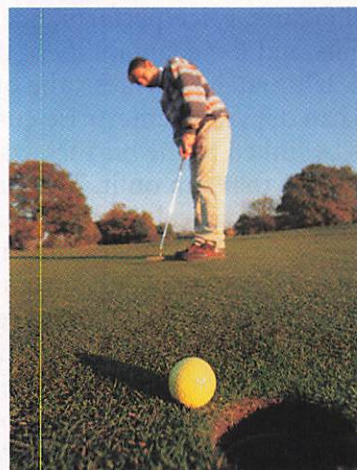


GOIN' MOBILE

WiFi hits the links

The next time you play golf, you may be toting a GPS device with your clubs. A partnership between GPS Industries and Jencess Software & Technologies aims to enable golf courses to integrate GPS devices with back-office and facility-management software. The goal is to create a single system for managing a golf course's business needs.

Mill Run Golf and Country Club in Toronto recently deployed the new system, which combines GPSI's Inforemer Differential, a GPS-enabled multimedia display and communications unit for golfers, with Jencess's Connect Suite golf course management system, which covers tee sheet and online reservations, point-of-sale functions, food and beverage management, and financial and accounting applications. GPSI's WiFi backbone connects the devices with the back-end software.



Mill Run will equip 60 golf carts with Inforemer's Windows CE-based display devices. It will also provide 15 handheld units for golfers who prefer to walk the course. Club officials say the technology will "enhance the golfing experience" and improve core business functions such as managing tournaments, speeding up play, assisting food and beverage sales and providing a promotions and advertising platform.

THE NEWS	WHAT IT MEANS	ANALYST'S TAKE	ADT'S TAKE
Microsoft is making a push to woo PeopleSoft customers after Oracle's takeover.	The software giant is capitalizing on concerns PeopleSoft customers have about getting support from Oracle.	"PeopleSoft is one of [Microsoft's] most important partners" in the ERP space, says Paul DeGroot of Directions on Microsoft. Oracle's purchase of PeopleSoft "has very clear, negative implications for Microsoft."	A bigger Oracle that doesn't tick off its new customers looms as a strong competitor to Microsoft.
Several surveys cite a modest rise in corporate IT spending in 2005.	Companies may allocate more funds to such revenue-enhancing technologies as CRM, wireless and business intelligence tools.	"Business expectations are now forcing CIOs to transform the [IT] organization, and 2005 is the year where CIOs must deliver more value and become a contributor rather than a commodity," Mark McDonald of Gartner says.	The same surveys—including Gartner's—also cite security and business process improvement as high priorities. Risk management and cost control will be more important than ever.
IBM has pledged free access to 500 of its software technology patents, as long as the resulting products conform to the Open Source Initiative's definition of open-source software.	IBM has already shown staunch support for open source. This pledge is the latest step in the company's push to be recognized as a leader in open-source software development.	"IBM's stature lends long-term viability to the principles of open source," Gartner's Yefim Natis says. "IBM's latest move puts new pressure on Microsoft—indirectly casting it as a proprietary alternative."	IBM is still the technology patent king, with more than 40,000 worldwide. However, with this move, the company appears altruistic, and competitors may feel pressure to follow suit.

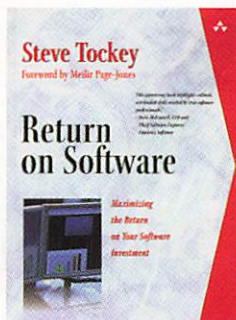
WHAT DO YOU KNOW?

What's a mobile agent?

1. A Java class that inherits the interface for modifying a class object
2. A set of software services developers can use to add animated characters to interactive Web pages
3. A kind of software nomad that acts as your personal representative on a network
4. A person who drives a people mover in an airport terminal.

The first person to respond with the correct answer will receive new copies of *Requirements-Led Project Management* by Suzanne Robertson and James Robertson, and *Return on Software: Maximizing the Return on Your Software Investment* by Steve Tockey, both published by Addison Wesley (2004). Please send your answers to cschaller@adtmag.com.

For answers to previous questions, go to www.adtmag.com.



IVORY TOWER

The Data Warehousing Institute has published a booklet in which writer Maureen Clarry (a TWDI faculty member) lists "10 mistakes to avoid when attempting business performance improvement." Here's a quick rundown of the 10 mistakes. If you want more details, contact info@dw-institute.com:

1. **Assuming training is the silver bullet.** It's a common misconception among managers that enough training can solve any problem.
2. **Focusing on tasks instead of results.** To put it another way, don't micromanage.
3. **Ignoring the impact of organizational culture.**
4. **Minimizing the importance of business alignment.** When senior management can't clearly articulate its vision, IT attempts to align with the business anyway.
5. **Replacing component parts.** Remember the boxes on your org chart represent people.
6. **Looking exclusively outside for answers.** Relying too much on con-



sultants and best practices can sometimes cause more problems than it solves.

7. Missing motivation. Successful companies instill in employees the initiative, authority and ability to manage their own work.

8. Settling for soft results. The business result of an initiative needs to be quantified to be appreciated.

9. Assuming team members are the same. Everyone has unique strengths; training alone won't make the difference (see Mistake 1).

10. Focusing on poor performance. If you spend too much time trying to plug an employee's "skill gaps" with training, it's damage control and not development.

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Architecture lines up with business goals

CASE STUDY

To keep pace with competitors in the annuities market, Transamerica Life Insurance Company had to find a way to leverage its legacy information systems as it forged ahead with plans to remain a key player in a faster, changing business environment that required more responsive technology.

The task

For Transamerica, that meant automating six business processes and enabling self-service for its customers, as well as the roughly 45,000 third-party agents throughout much of the U.S. that act as the company's sales force.

To do that, Transamerica used SeeBeyond's Integrated Composite Application Network to create a set of services on a service-oriented architecture. The suite includes tools for integration and business process management that automate and orchestrate complex business processes and workflows spanning Web services, systems, people, and companies.

The move to an SOA helps Transamerica answer respond to the business challenges of attracting and retaining customers, providing consistent access to multiple products across multiple channels, meeting customer demands for real-time information, and reducing the cost of launching new products and channels.

The goal

Jeff Gleason, director of IT strategies for the financial markets group at AEGON, Transamerica's parent company, says he and his colleagues are trying to make the company more agile to meet the demands of agents and customers who want information quickly, and align the technical architecture with those strategic business goals for the next two years.

"Much of it has to do with the fact that our business is dependent upon

third parties, basically banks and broker dealers," Gleason says. Transamerica must customize its solutions to meet a distribution partner's needs "quickly, efficiently and cost effectively," Gleason notes.

Because at least 85 percent of the company's business logic resides in its mainframe systems, Transamerica needs to accommodate both its batch and real-time systems, Gleason says.

When Gleason's division began planning the project, his IT team immediately cited nightly batch runs as an impediment to a real-time strategy, he says. The goal was not necessarily to replace the batch systems, but to align them with modern business processes.

The next steps

Gleason's group has completed work on seven business services that the company manages through B2B data exchanges. The next steps: Continue building business services and executing projects that cover those services. "It'll probably take us about another year to create business services that accommodate the changes we foresee," he says.

The SeeBeyond suite helped Transamerica's efforts because it could handle the many complex data transformations the effort involved, according to Gleason. The company also looked at pure-play extraction, transformation and loading tools, but Gleason says that, at the time, the ETL tools they saw "provided very limited support for [an] SOA," and many of the tools required too much coding. That wasn't going to work since the aim was to simplify the architecture and leverage a talent pool of mostly mainframe programmers, he notes.

"Usability of the solution and reducing the complexity of the SOA were ... key factors for us," Gleason says.

—Rick Saia

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Kevin O'Marah, AMR Research



IT'S ROLE IN THE SUPPLY CHAIN

Kevin O'Marah is vice president of research at AMR Research in Boston, where he directs the analyst firm's coverage of supply chain technology. In this interview with ADT, he looks at the potential of radio frequency identification (RFID) and how IT should respond to demand-driven supply networks.

Q You've defined RFID as the killer app of supply chain investment for the next decade. Aside from the retail and distribution industries, as well as the Department of Defense, where its uses are either obvious or fairly well known, where else might RFID provide high value-added benefit?

A Probably any service-intensive, engineered-to-order product. So, machinery as installed in a factory, perhaps equipment that supports utilities and telecoms; for instance, in the telecom business, the tracking of plug-in circuit cards, which are very expensive. They look all the same to the naked eye, yet are a huge source of poor asset utilization. So, a lot of these installed-base capital equipment applications are places where RFID could have a really nice value proposition.

Q You've also addressed the issue of demand-driven supply networks, most exemplified by a company such as Wal-Mart. If customers are exerting a lot of pressure on enterprises to meet their supply demands, what processes should IT organizations have in place to quickly satisfy their companies' customers?

A Probably the most important one is sales and operations planning. Sales and operations planning is a process whereby forecasts and orders

and any other form of demand statements are merged and rationalized with supply plans, capacity plans and lead time so that an organization can be ready to respond operationally.

Q Amid all that IT organizations must do, does this add stress?

A No, actually, it should alleviate stress. Stress comes from firefighting. Firefighting is a characteristic of a system that was built to handle the same old transaction over and over again, but is, in fact, now facing constant change. Building a demand-driven supply network says, "Let's take this change as a fact of life and get ourselves into a mode where we're inherently flexible and inherently agile." So, the stress of dealing with problems becomes something that is more extraordinary instead of a daily firefight.

Q Name a company or two that's doing this the right way.

A By far and away, Proctor & Gamble. We've seen them a lot. They do it on all levels. They do outstanding product innovation. They're extremely good at listening to and perceiving trends in their consumer markets. They also do an extremely good job at engaging with their supply base and planning their capacity to minimize waste. And at the same time they do a tremendous job of engaging downstream with

customers, meaning retailers... So, it's not just the familiar ones. For instance, I think Wrigley (the chewing gum manufacturer) is a very good organization. They have some pretty sophisticated processes in place.

Q What technological capabilities must IT have to improve at supply chain management?

A Probably the most important ones are connectivity or communication; being able to get a look at your customer's forecast, being able to get a look at your supplier's capacity or on-time commitment, and understand those things. And then on top of that, analytics, being able to understand the implications of those things.

Q What organizational capabilities will IT need in supply chain management?

A Probably the most important single one, outside of the famous truism about understanding the business needs, is benchmarking: operational benchmarking, not technology benchmarking. How well are the tools that I'm rolling out helping the organization improve its benchmarks for lead time, cash-to-cash cycle time, perfect order performance, time to value, etc.? That's the ultimate measure of an IT organization's effectiveness and how well they can make those things happen with the deployment of technology tools.



O'MARAH

BACK OFFICE

When you put together that next internal technical manual, think "leaner is better." A study by New York technology firm Data Conversion Laboratory claims that more than half of the data in corporate and technical manuals and other documents are "wasted words," meaning that enterprises are spending twice as much as they should on twice as much content as they need. The study examined documents from a range of industries—including aerospace, pharmaceutical and defense—and found much of the content was duplicated.

NOTHING BUT NET

Electronic communication compliance will top the list of concerns for businesses in 2005A, according to the newly formed Electronic Communications Compliance Council. The industry group, comprised of experts in electronic communications, compliance and law, aspires to provide best practices and resources to companies grappling with e-mail and instant messaging policies and compliance.

Go to www.TE3C.org to find more information about the council and its members.

BACK TALK

We at ADT are always interested in what you have to say about what you're reading in the magazine, especially how well it may be helping you in your work. If you have a suggestion regarding a topic we should cover, or a comment regarding something you read, please send an e-mail to Rick Saia, executive editor, at rsaia@adtmag.com.

ADT ON YOUR DESKTOP

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Look for a lineup of new e-newsletters this month from *Application Development Trends*. AppTrends, an enhanced version of eADT with new features, including Web search capabilities, will be the first to hit your in box.

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February poll question

After you read our cover story in this month's issue, visit the home page and voice your opinion:

If your organization is running IBM's Lotus Notes/Domino messaging and collaboration platform, are you planning to:

- o Migrate to Lotus Workplace?
- o Migrate to another vendor's platform?
- o Stick with Notes/Domino?
- o Don't know yet.

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2. Scope managed efficiently.
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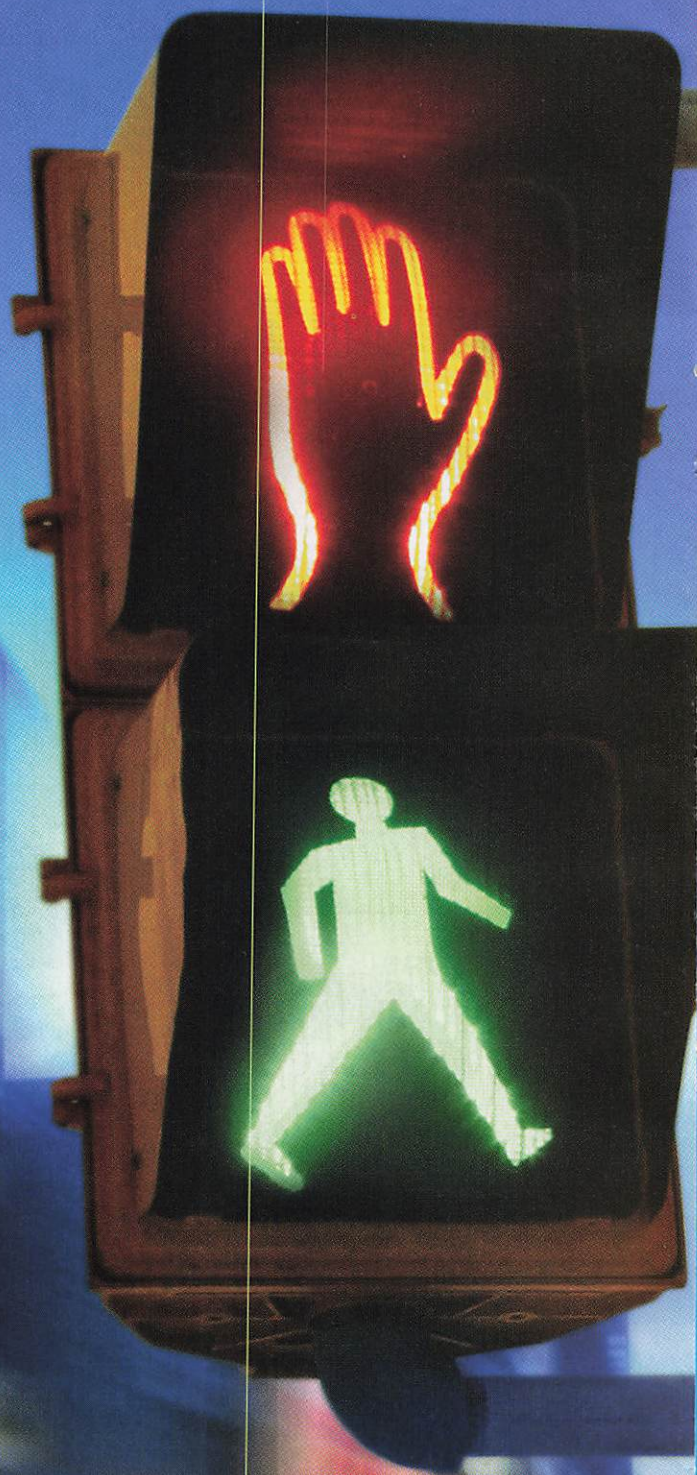
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IBM CROSSES SIGNALS

DOMINO OR
WORKPLACE?





While IBM touts Workplace, Domino/Notes customers wonder whether they should stick with a potentially obsolete platform or migrate to the new messaging and collaboration environment.

BY STEPHEN SWOYER

Rumors about the impending demise

of IBM's Lotus Notes/Domino platform are nothing new. However, when IBM announced its Lotus Workplace messaging and collaboration platform in late 2003, the fate of the venerable combination seemed lost in space.

Workplace, for the uninitiated, is a messaging and collaboration platform that's powered by IBM's WebSphere Web Application Server. Many Lotus customers are wary about Workplace because Big Blue already markets Lotus Notes, another messaging and collaboration environment, which is based on another application server, the near-decade-old Domino.

At first, IBM was careful to position Workplace as an offering for shops without Notes and Domino—or any other messaging platform, for that matter. Over the last 12 months, however, IBM has disclosed more ambitious plans for Workplace. Officials are adamant that Notes and Domino aren't going anywhere, of course. However, at the same time, the company is delivering, or plans to deliver, more tools to promote Domino and Workplace coexistence—or to facilitate full-fledged Domino-to-Workplace migrations. At some point, IBM officials say, Domino and Workplace will converge into one product.

It's not surprising, then, that some longtime Notes/Domino developers take a decidedly pessimistic view of that platform's future. "As far as I can tell from the buzz, Domino is on the way to its grave within the next few years, and I will be forced to find an alternative," says Robert LaRock, a programmer with Standard Abrasives. When that happens, he says, Workplace probably won't be on his short list. Standard Abrasives is a small company, and LaRock doesn't have the budget or in-house expertise to transition to Workplace or WebSphere. "We have several critical applications running on

WHY WORKPLACE?

- Some longtime developers of Notes/Domino are pessimistic about the future of that platform with IBM's impending debut of Workplace
- IBM says one important attraction of Workplace is its ability to retrofit Domino applications to participate fully in next-generation application architectures, such as an SOA.
- One reason some enterprises might stick with Domino: Its ease of use, especially for programmers.

ILLUSTRATION BY AVNER LEVON

TALKING POINTS

Making a more versatile Workplace IDE

The biggest obstacle to Workplace's uptake could be the absence of a powerful and easy-to-use IDE that's on par with Domino Designer. IBM's Rational Application Developer, the default Workplace IDE, is based on the open source Eclipse framework and has a dedicated following in the J2EE tools space. **Even IBM officials concede it's no Domino Designer.** "Even though I can do quite powerful things in Domino Designer, I'm doing them at a level of script development, which means I've got a quicker design cycle," says Jim Russell, IBM's director of application development tools for Lotus. "Also, there's the fact that at the level of scripting, I'm able to manipulate artifacts, like documents, like fields, that are somewhat higher level and have their own built-in semantics, which makes it easier to build the kind of things that work in the Domino context, forms and views."

IBM recognizes this is a problem and is trying to correct it by essentially grafting Domino Designer features onto a new Workplace-ready version, which should ship by midyear. "We've got something we call Workplace Designer, which is there to bring the same kind of scripting development to the Workplace platform, to make it easier to build the same kinds of applications in Workplace," Russell says. "Our goal is to make sure that people who are comfortable in Domino Designer or other script environments, things like Visual Basic or PowerBuilder, are at home here."

Elsewhere, **Big Blue is prepping a Workplace Services Express product,** which is due out soon, along with the next version of Workplace, slated for release early this year. In both releases, Big Blue promises improved and expanded collaborative capabilities.

—Stephen Swoyer

the Domino platform, in addition to mail," LaRock explains. "Our company has a considerable investment in Domino development skills and infrastructure. It will be painful to abandon it."

However, all this begs the question: Why should longtime Lotus customers such as Standard Abrasives jump ship to Workplace? After all, Domino is justly celebrated as a platform that enables the rapid development of collaborative applications, and many shops have made substantial investments in custom Domino-based software projects.

What's more, before IBM delivered Domino in 1996, the programming community concentrated heavily on the Notes client. If customers make the move to Workplace, they'll want to take these applications based on Domino/Notes with them. Depending

on how significantly they have invested in the platform, this could be a daunting proposition. Unless IBM pulls the plug on Notes and Domino, some say, there's little chance these customers will budge on their own.

"None of my clients has made the migration, nor are they intending to," says Patricia Egen, a principal with Notes and



Domino consultancy Patricia Egen Consulting. "They are too confused—as we all are—by the IBM plan, and until they have a more comfortable opinion of

what's actually in the works, they are not choosing to move."

Nevertheless, IBM believes many customers will want to do just that. What possible incentive, short of threatening to pull the plug on Domino and Notes, could IBM give existing customers to convince them to make the move to Workplace?

Domino is RAD

Domino's biggest selling point is its ease of use, particularly from a programming perspective. Its primary development environment, Domino Designer, uses a script-based language called LotusScript, which many Notes and Domino developers compare to Visual Basic, both for its simplicity and rapid application development capabilities. "We can whip out an application in under a week and sometimes get the first prototype in just a couple of hours," says John Dillon, a Notes/Domino programmer with Rockwell Scientific.

This is often the case, Dillon says, even when applications have demanding workflow requirements, thanks largely to the Notes and Domino combo's excellent workflow management capabilities. There's canned support for workflow management in the base Domino Designer IDE, and IBM offers a standalone Lotus Workflow product, a graphical design tool and workflow engine that sits on top of Domino and speeds the creation and deployment of apps that have sophisticated workflows. "Obviously the bigger systems like travel or purchasing require

"They are too confused by the IBM plan, and until they have a more comfortable opinion...they are not choosing to move."

quite a bit more time to put together, but lessons learned in the big projects have really streamlined our development process for smaller projects as well," he comments.

Dillon isn't the only developer who sings the praises of Domino's RAD and workflow management capabilities. Take longtime Notes and Domino shop Standard Abrasives, which has built several custom applications on top of Notes and Domino, including a research and development project tracking and management support system, an action request system, and an employee records application. All involve complex workflows that touch a number of different applications and systems.

In this respect, LaRock says, the ability to quickly and cheaply build powerful collaborative applications helps offset the comparatively high cost of Notes and Domino's annual licensing and maintenance fees. "Frankly, the yearly licensing for Domino is exorbitantly expensive for us. However, the high cost is offset by the low cost of development," he confirms.

LaRock doubts he and his team of Domino developers could duplicate their work with as little effort in a Workplace environment. "Our custom applications revolve around automating various workflows and integrating them with Domino's ability to easily present applications using Notes clients and Web browsers," he confirms. "We make extensive use of Domino's ability to create workflow, notification and tracking applications. The primary appeal is the ease and speed that this can be done using Domino."

For this reason, many longtime Notes and Domino programmers, including several who have developed solutions for Workplace, say IBM's next-generation messaging platform has a long way to go before it's as powerful and easy to use as Notes and Domino. "It's probably around what Notes R1 has in [terms of] capabilities. The programmability is just not there yet and won't be for years. At this point, it's really usable only if you want to use the Lotus applications bundled with it," comments Ken Yee, a prin-

cipal with custom Notes and Domino development house Key Solutions.

What about IBM's positioning of Workplace as a solution for existing Notes and Domino shops that want to standardize on a hybrid J2EE and Web services application architecture? It's a nice thought, Yee says, but even in this



"For customers with complicated in-house Domino applications, I would not recommend ... [migrating to] Workplace."

case, Workplace isn't exactly a straightforward proposition. "It's nice that it uses standards, but none of the Lotus Workplace applications are portable to other J2EE servers," he concludes.

Coexistence, not competition

IBM's Russell argues such complaints are beside the point. Certainly, he concedes, today's Workplace isn't as robust a collaborative platform as Notes and Domino, but the latter products have almost two decades of development behind them, versus two to three years for Workplace. More to the point, Russell says, speculation about the future of Notes and Domino is counterproductive and unnecessary. As far as IBM is concerned, they aren't going anywhere: Notes and Domino 7 are in beta, and Big Blue also has Domino 8 on the drawing board.

"We're very concerned with protecting [customers'] assets," Russell says, talking up a coexistence strategy in which Notes and Domino are deployed alongside Workplace, and in which the two products eventually converge into one—at this point, Release 8, slated for 2007 or 2008—that gives customers the option of deploying both or either. "We understand there are hundreds of thousands of Domino applications in the world—maybe millions—many of which are Notes applica-

tions, and we are very interested in making sure that investment base is protected, so those applications will continue to run."

But how will they continue to run? In this respect, IBM sees Workplace as a long-term replacement for Notes and Domino. This isn't to say that Notes or Domino is going away, just that they're

being moved—to the periphery. In IBM's vision of the collaborative, knowledge-sharing platform of the future, Workplace is at the center, while Domino is off to the side somewhere.

Taking the plunge

Andreas Nebel, a programmer with GEDYS Intraware, a German software vendor that develops CRM and HR solutions and products for Notes and Domino, says his organization has deployed Workplace alongside its Domino system. GEDYS plans to maintain both systems, because it hasn't been able to move its custom Domino applications over to Workplace, Nebel says.

"Our company has applications based on Domino," he says. "We did not move the applications; we implemented a completely new product [Workplace]." The biggest impediment to migrating the applications, Nebel says, is the Domino and Workplace architectures are so different. Besides, he adds, it's relatively easy to expose Domino applications to Workplace via the WebSphere Portal. So, there really wasn't a pressing need to recode the applications for Workplace, anyway. "The technologies are too different. We can integrate our products in Workplace around our Web interface," he says. As for the Notes

It's all about J2EE and Web services

One important attraction of Workplace, says Jim Russell, director of application development tools for Lotus, is the ability to retrofit Domino applications to participate fully in next-generation application architectures. Notes and Domino are very powerful, Russell says, but they were designed before mass acceptance of Web services and the advent of service-oriented architectures. **For customers who wish to expose their Notes and Domino collaborative applications as Web services, or who want Notes and Domino to be part of an SOA, Russell argues that Workplace and its J2EE-based WebSphere underpinnings are just the ticket.**

"Domino is still the most cost-effective e-mail system on the planet, and it also has very good productivity for the team-based applications, but Workplace is bringing sort of the enterprise characteristics to this, the J2EE integration, the building on top of the WebSphere portal," Russell says. "Using the portal, we have connectivity to SAP, Siebel, PeopleSoft, and Domino—and you can tie in those applications as portlets into your Workplaces, so that you have access to that information, and at the same time, you have access to people awareness." What this means, he says, is **customers can tap Workplace to expose Domino collaborative applications to SAP, Siebel, and other systems:** "This lets [users] see who is online at the moment, and at the same time have access to the team-based documents they need for their particular environment."

Canned connectivity a courtesy

There is, on paper anyway, a slight problem with this vision: **It could just as easily include Domino, to the exclusion of Workplace.** After all, Workplace's canned connectivity to SAP, Siebel, and other application systems is delivered courtesy of the WebSphere Portal, not because of any tooling IBM built into Workplace. And, IBM has promised to deliver enhanced support for Web services in Domino 7, due this year. More to the point, IBM bundles a version of WebSphere Portal with Domino. Why couldn't existing customers use this to link their Domino collaborative with SAP, Siebel, and PeopleSoft systems on the back end?

It's a nice thought, Russell concedes, but it just won't work. "Domino includes the [WebSphere] Portal, which includes connectivity to SAP and Siebel and PeopleSoft, but this [connectivity] is only available as part of the portal extended package," he explains. **"The reason we have WebSphere Portal in the Domino package is so that you can basically take Domino Web applications and put them together in portlets.** It's to enable further reach for your Domino applications by making them accessible through browsers."

But couldn't Domino customers just license an extended version of WebSphere Portal that comes bundled with adapters for SAP, Siebel, and PeopleSoft? And if that's the case, why doesn't IBM give customers the option of purchasing an extended version of WebSphere Portal along with Notes and Domino? "It would be sort of a packaging question, whether that particular packaging contains the access to SAP and PeopleSoft and so forth. In the context of what you get with Domino, that would not be in the package. The Domino package is about integrating the Domino applications themselves," Russell comments.

For this reason, many **Notes and Domino developers are suspicious of IBM's Workplace strategy.** "I like that [Workplace] promises to take advantage of new technology standards, but honestly, they could have built that functionality into Domino," says Jimmy Ray, a Notes and Domino developer. "It all stems from the IBM flagship product [being] Websphere. Workplace is Websphere and Domino is not."

—Stephen Swoyer

client, Nebel says IBM has promised to provide a plug-in that lets Notes interoperate with Workplace. (See related story, "Making a more versatile Workplace IDE," on page 22.)

So why make the move to a Workplace technology that even he admits is not quite ready for prime time? The promise of working in an environment that is more friendly for J2EE and Web services, Nebel says, coupled with the attraction of IBM's Java-based Workplace Client Technologies, which gives Workplace a full-fledged, standalone client that's comparable to Notes. (See related story, "It's all about J2EE and Web services," on this page.) Then there's the fact that IBM is clearly committed to getting Workplace right, he adds. So, even if he can't endorse Workplace as a solution for existing Notes and Domino customers, Nebel says they should have it on their radar screens. "It is very difficult, and I cannot advise customers to move to Workplace," he says. "It is too early. Maybe in the next few months or years."

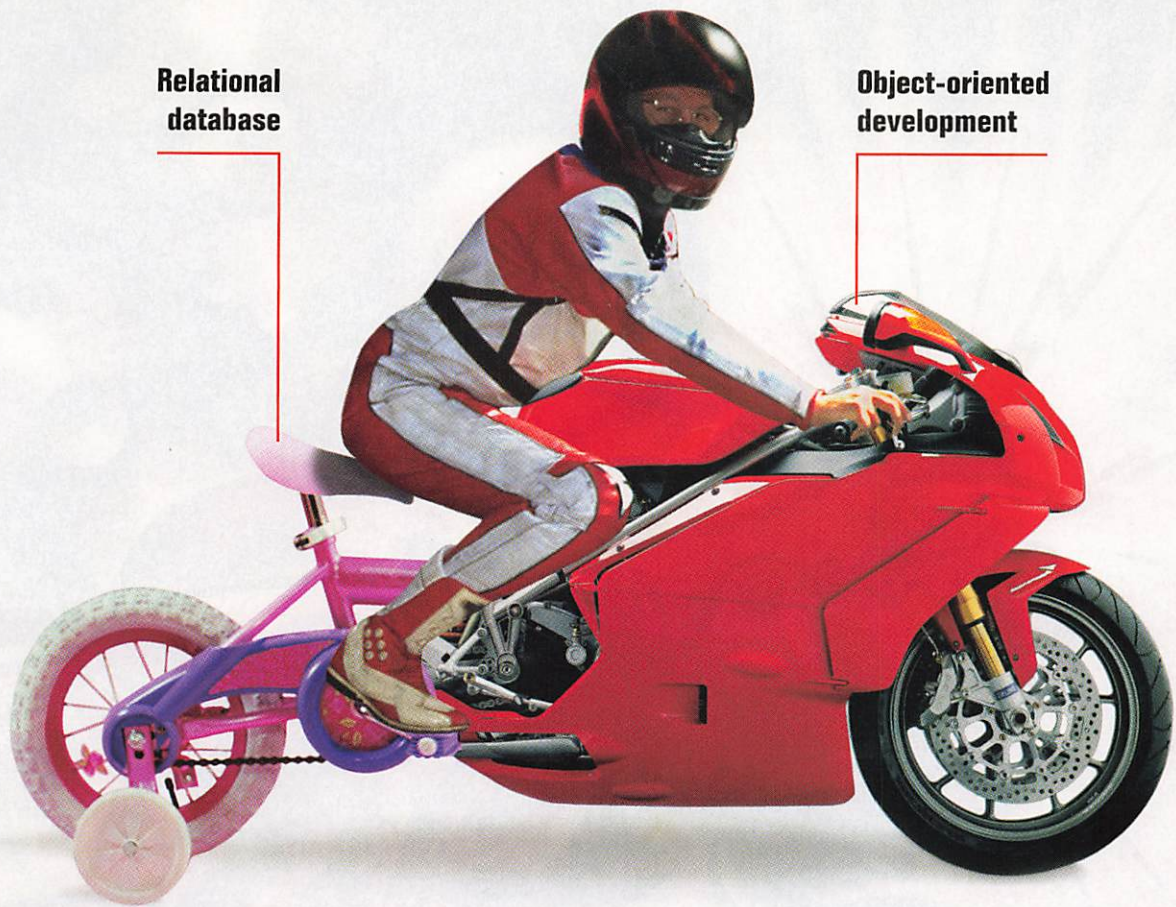
But that shouldn't stop interested Notes and Domino shops from familiarizing themselves with the technology, he adds, noting "IBM has good and working coexistence tools."

For the time being, Key Solutions' Yee says, the ideal Workplace adopter is one who doesn't have a significant investment in custom Notes and Domino apps. "If a customer is using Domino purely for e-mail and has no custom applications, they'd be a good candidate for a Workplace migration. Or if a customer wants users to have an internal secure version of Hotmail with some added collaboration and document storage applications, then they'd be a Workplace candidate," he concludes. "For customers with complicated in-house Domino applications, I would not recommend ... [migrating to] Workplace." ●

Stephen Swoyer is a technology writer based in Athens, Ga.

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Open-source

users find rewards in collaborative development

IT shops discover that sharing code outside the corporation can result in better software.

BY ALAN JOCH

Banks pride themselves on playing things close to the vest. So, when Dresdner Kleinwort Wasserstein's IT group shared the code of OpenAdapter, an internally developed tool, with the development community, it caused a sensation. "It was astonishing," recalls Steve Howe, DrKW's global head of open-source initiatives. "They found it difficult to believe a bank was open sourcing something."

OpenAdapter, a back-end Java integration tool that helps integrate bank apps with little or no custom programming, had become "a famous piece of software within DrKW," Howe says. "Half of the decision to open source it into the wider financial community was to try to replicate that enthusiasm."

DrKW's motive for releasing the tool was hardly altruistic. By releasing the tool to the wider financial community, the investment bank hoped to benefit from the bug fixes and refinements other programmers in Europe and North America might make.

However, Howe and other open-source experts warn that corporations' code-sharing projects require a number of safeguards to protect intellectual property and keep companies from becoming unwitting victims or distributors of destructive code. Some companies believe such risks outweigh the potential benefits and resist open-source business applications. DrKW and other firms believe careful open-source collaboration gives them a competitive advantage.

Open source matures

Open source is no longer relegated to backroom projects. IDC recently predicted Linux would capture more than 20 percent of the server market this year, with a growth rate about twice that of Windows. Many corporations now consider open-source alternatives when they evaluate technologies for new projects. "Open source is attacking the underlying costs of running an IT department," Howe reasons. "The lower our infrastructure costs, the better."

OPEN-SOURCE COLLABORATION

- Collaborative development of open-source software can yield cleaner code and more innovative applications.
- Two challenges: Protecting intellectual property and guarding against the possibility of unknowingly distributing destructive code.
- Open-source development may work best in autocratic IT environments. Jim Herbsleb of Carnegie Mellon University says the most successful projects he's seen are run with an iron fist.

TALKING POINTS

Open source's popularity is twofold. First, IT managers believe paying little or nothing to license open-source software gives their resource-strapped departments a financial edge on new initiatives. In addition, open-source software often provides the capabilities to meet require-

ments without burdening IT systems with the feature bloat that commercial software vendors sometimes rely on to distinguish themselves. "With our code, we found it ran better and the costs were less with JBoss [an open-source application server] than with a commercial

alternative," reports Raven Zachary, director of Internet technologies for the La Quinta Inns hotel chain, Irving, Texas. "That's probably because JBoss is more lightweight than the very robust, feature-rich commercial stack."

Collaborative development is another big advantage of the open-source model because a large group of interested developers often provides extra eyes and ears that can be extensions of in-house development departments. Now that such advantages have opened the open-source door into corporate IT departments, managers are turning their attention to these advantages to determine how best to incorporate the revisions and innovations open-source developer communities create, while using in-house resources to tailor products to individual needs.

Collaboration considerations

Open-source success requires more than just the freewheeling, collaborative attitude frequently associated with the open-source movement, says Jim Herbsleb, an associate professor at Carnegie Mellon University's International School of Computer Science and a member of its Institute for Software Research. After studying several open-source development efforts, including that of the hugely popular Apache Web server, he believes several conditions must exist for open-source development to thrive.

Open-source techniques in commercial development work best when programmers maintain or enhance existing software, not when they develop the software's initial core functionality, he says. "In commercial software development, the early stages of design work are highly collaborative; people spend a lot of time together in meetings," Herbsleb explains. "In open-source development, that kind of face-to-face contact is exactly what you don't have." Instead, open-source communications rely on e-mail messages and forums.

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Application Development Trends

Herbsleb also observes people who are most active in developing open-source software are typically those who will become power users of the programs. Problems arise when end users range beyond this group, such as in a corporation in which non-technical business people are the target users of a new application. "Doing the extra work to understand the needs in some depth of an end-user community is not something that's usually a part of open-source development," he says.

Finally, open-source development works best in a kind of IT autocracy. "The rhetoric around open-source focuses on democracy and group participation," Herbsleb says. "That's certainly an aspect, but I've found that most successful open-source projects are run with an iron fist."

A single person or a small group should control what code goes into new releases, he says. "If someone offers code that the group thinks is inappropriate for whatever reason, they keep it out."

The core developers manage the features definitions of a new application, assure code quality, and set deadlines. In some cases, companies have two collaboration communities: one a tightly regulated group of core developers, the other a more public group with wide participation that primarily tests the code to identify bugs. The first group is also responsible for corporate reputation, combing through code looking for anything damaging or unlawful.

Organizations that can establish this overall development structure can reap benefits from high-quality, easily modified code without licensing fees. "It's like finding a big stash of computers for free," Herbsleb says.

Banking on open source

DrKW believes it found development success with OpenAdapter by creating a variation on the collaborative model the open-source community pioneered. The

integration tool uses SpiritSoft's Spirit-Wave Enterprise Service Bus to facilitate communications among applications that must share and integrate data. "We open sourced the tool within DrKW and told people that if they needed to change OpenAdapter slightly, they were free to

do that," Howe says. "A lot of developers decided they could make a name for themselves by contributing to the software." Today, more than 100 applications in the bank use the integration tool.

To tap similar expertise outside DrKW, the bank turned to CollabNet,

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a commercial project-development platform from CollabNet in Brisbane, California. CollabNet provides a number of services, including version control tools and discussion forums common in free open-source clearinghouses such as SourceForge. DrKW went with a commercial solution because it wanted to tap the company's open-source expertise. CollabNet helped the bank establish a separate legal entity called the Software

Conservancy, which owns the intellectual rights to OpenAdapter.

The site publishes the latest stable build of the software, which anyone can download. Users can also send in complaints and error reports and suggest bug fixes. So far, DrKW has received input from developers at competing banks and from companies outside the financial industry. Collaboration consists of technical subjects, not information that in-

volves trade secrets or confidential customer data.

Developers interested in becoming more involved in OpenAdapter's evolution can gain access to the source code by signing a legal agreement that assigns the intellectual property rights of their code to the Software Conservancy. About 20 developers now hold such status.

Legal waivers aren't DrKW's only safety net. Before making its code public, the bank combed through developer comments that referenced IP addresses and host server names that may have made it easier to break through DrKW's security defenses. It stripped out the standard developer comments that might prove embarrassing or even libelous. "We edited out things like, 'I wrote this code much faster than Martin because I'm a better developer than Martin is,'" Howe says.

The bank relies on its own in-house testing processes rather than bug reports from the larger community to assure OpenAdapter's safety. "We try to unit test everything. As we write the code, we write tests for the new code," Howe says. In addition, after a code freeze, the company spends another two to three weeks testing the latest build. "When we do a new release, we want to make sure it really works."

All of these considerations mean that while open-source software doesn't carry licensing fees, it's not necessarily free. "Open-source isn't free of responsibilities," Howe says. "Even when someone sends you a bug fix, you have to test to make sure there really is a bug, and, if there is, that the fix actually works. Open source isn't software for nothing. You have to make an investment in it."

So far, that investment has paid off with OpenAdapter. Howe believes the input he gets from the open-source community is like having a couple extra development people on his staff to improve and refine the code. There's another intangible benefit. "This project has im-

It works when a developer gets stuck

According to open-source development veterans, the collaboration model offers several technical advantages, but by no means guarantees success. For open-source development to work, experts offer the following suggestions:

Adopt public-domain code carefully. Even though a larger development community may validate open-source code, La Quinta's Internet technologies division treats the software as if it's running it for the first time. The company runs code developed out-of-house through a full suite of regression, load cycle, quality assurance and functional tests using commercial testing tools. As an extra safety measure, the division runs production systems with open-source software that's a revision or two behind the current release to give bugs and bug fixes time to become public. "We're not a bleeding-edge production shop, although we are downloading the latest betas or alphas so we're always in the know about the newest technologies," Raven Zachary, director of Internet technologies, says.

Clearly define code specifications. The open-source approach doesn't eliminate project management skills that all development projects require, says Jorg Janke, principal of Compiere, Monroe, Conn., developer of the Compiere ERP open-source application. "We found most of the collaboration that happens with open-source development concentrates around coding," Janke says. "Because today's development tools are so productive, coding may represent only about 10 percent of the development effort. The rest of the work is focused on project specification and definition."

For the collaborative model to work, **define product specifications.** "The objective should be to meet the spec, not to have a big discussion about what should be achieved," according to Janke. Vague specs can turn code collaboration into a nightmare, he adds. "When it comes to vaguely defined software, the only way to get proper collaboration is to turn to very traditional development practices: defining the scope of the project, defining the APIs, defining the time frame, and then splitting up the work," Janke says.

"What does work is when developers communicate by saying something like, 'Hey, I'm stuck here, does anyone have any ideas?'"

—Alan Joch



HOWE

proved the reputation of DrKW, especially among younger developers," Howe explains. "We've been able to attract a lot of talented people who are interested in doing open-source development. This makes DrKW a cool place to work in compared to other investment banks."

Reining in the code

Lucent Technologies/Bell Labs, in Naperville, Ill., is developing a multimedia server for telecommunications companies based on the maturing Session Initiative Protocol standard. Three years ago, Lucent began embracing the open-source collaboration model to revise the server, using company developers. "As SIP gained momentum, we saw the need to have a unified Lucent approach, and that's where precepts of open source come in," explains Vijay K. Gurbani, author of the server and a Lucent technical staff member.

Confirming Herbsleb's observations about collaboration success, Gurbani confines source code changes to a small collection of core developers who work in groups assigned to various portions of the server. Given his status as the original developer, Gurbani remains responsible for the server's core architecture and guides decisions about which new features should go into the server. Others within Lucent contribute performance enhancements, compression capabilities, and changes in related standards. "I act as the clearinghouse for what tasks need to be done," Gurbani says.

The developers use the Web to communicate and coordinate tasks, but so

far, Lucent hasn't set up a structure as formal as what's possible with SourceForge or CollabNet. "We haven't reached the point where anybody can download source code from the Web," Gurbani explains. "It's currently mostly a manual task: If a new [group of developers] wants the code, I send it to them via e-mail or post it on a Web site."

By keeping tight reins on the source code, Gurbani can direct the server's evolution. "Some developers may want to change the code in ways that I feel are not conducive to the architecture as a whole and I'll decide not to include it," he explains, adding anyone is free to customize their own versions. "The changes may make sense in their world but not to the general version of the product," he says.

Deciding what goes in and what stays out isn't entirely autocratic, however. "In a pure open-source environment, it's the guy who's in charge who gets to decide," Gurbani says. "But here, we're driven by the needs of customers who ultimately pay us for our technology. Because of that, the decisions become more of a

"We've been able to attract a lot of talented people who are interested in doing open-source development."

management than a technical issue. The choices are driven by me and by managers who talk with customers to determine which new features should be added right away and which ones might be nice to have but can wait."

This collaboration of technical and managerial input results in a better product, Gurbani believes. "My research interests lay in signaling technologies, not in performance enhancement, so when I write code, I'm thinking about what I need to do to make the server compliant with standards. But when I turn the code over to our Bell Labs colleagues, who are performance experts, they say, 'You could have

used this technology here to the server run faster.' Another group might say that adding compression will improve things. I'd love to add that, but alone I just don't have the time." With the open-source approach, innovations don't have to wait, he says.

Cautious approach

Nevertheless, even companies that embrace collaborative open-source development for back-end systems say they're cautious when it comes to business applications. La Quinta Inn's Internet apps, which allow customers to reserve rooms via the Web, rely on a who's who of open-source technologies, ranging from Apache Web servers to TomCat JavaServer pages and JBoss application servers. A member of La Quinta's IT staff actively contributes to the TomCat code base. However, Zachary says the company's business applications are proprietary and too linked to legacy systems to risk sharing with anyone outside the company. "There's not an opportunity to contribute our code in

some open-source initiative," he says. "We might contribute code if, in our development cycle, we find a bug in an open-source infrastructure product like JBoss or TomCat. Then we're happy to contribute changes for common good. But otherwise, I don't think our company, for intellectual property reasons, would want to contribute core business code into the open-source community." Some things will always remain close to the vest. 

Alan Joch, a business and technology writer based in New England, can be reached at ajoch@monad.net.

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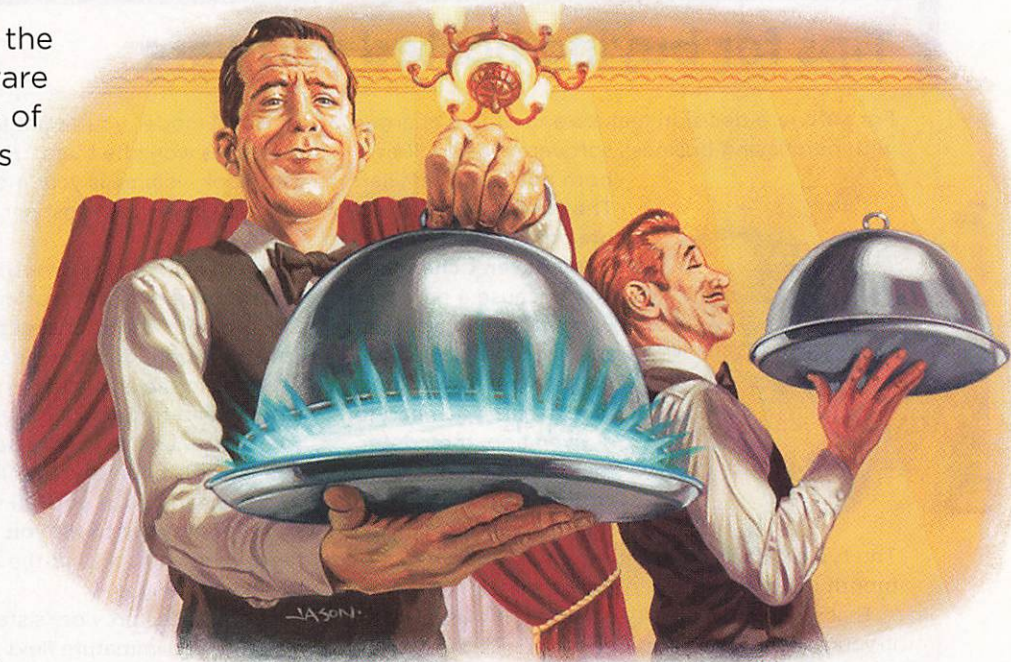


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Application Development Trends

APPS ON TAP

Enterprises warm to the idea of buying software as a service because of the low upfront costs and quick return on investment.



BY STEVE ULFELDER

Like any CIO, Unishippers' Kevin Lathrop jealously guards the personal information belonging to his customers. Although Lathrop is generally pleased with the way IBM provides Siebel CRM on a hosted basis for the Salt Lake City shipping company, there's one optional service for which he won't hire Big Blue: penetration testing to verify IBM is meeting its security service level agreements. "We'll be using another vendor," Lathrop says. "Otherwise, the wolf is guarding the henhouse."

Welcome to the odd new world of purchasing software as a service, in which your vendor offers to hack its own servers—for a price—to make sure your data is safe.

Even before Nicholas Carr asked whether IT matters anymore in his influential and controversial Harvard Business Review article, industry experts described a future in which businesses met their technology needs simply by writing a check and flicking a switch.

With IBM leading the charge, the IT-as-service phenomenon has rapidly taken hold, with the usual cacophony of terms, both generic and vendor-specific. IBM's moniker, On Demand Computing, has found a lot of traction. So have utility computing

and Hewlett-Packard's Adaptive Enterprise, provisioning, and metered services. Although they differ subtly, all describe the basic pay-as-you-go vision.

Writ large, utility computing encompasses every component in enterprise IT, from servers to the network to operating systems to applications to end-user devices. However, the subset that has taken off fastest and found the most acceptance in IT is application software. If nothing else, this

SOFTWARE AS A SERVICE

- Software as a Service, or SaaS, is a hot market, according to IDC, which says worldwide sales of hosted software will grow to \$8.1 billion through 2007.
- The key to the SaaS value proposition is the lower upfront cost compared to buying and deploying software the usual way. Another benefit: Upgrading packaged software requires hours of expensive IT staff time. With hosted apps, that burden shifts to the vendor.
- One problem: Integrating hosted software is often tricky, so many enterprises limit software services to applications that require little interaction.

TALKING POINTS

proves technology ideas, like neckties, never really go out of fashion—hang around long enough and they'll be back in style.

Today's catchphrases include hosted software, subscription-based software and

software as a service, or SaaS. A few years back, before the Internet bubble burst, application service providers—which are making a comeback—made the same offer. If you were around when IT was called MIS, you probably recall time-sharing.

By any name, SaaS is hot. According to research firm IDC, worldwide sales of hosted software will grow at a 26 percent annual rate to \$8.1 billion, through 2007, up from \$2.1 billion in 2002. During the same period, IDC forecasts low-single-

Tips for buying hosted software

For software decision makers and others charged with purchasing business software, SaaS will be both novel and familiar.

The **fundamental principles of contract negotiation haven't changed** just because a new buzzword has been added to the lexicon. You'll still need to determine how many seats you need for a given app, then determine the term of the contract, and finally seek the deepest discounts.

The typical SaaS contract structure charges \$X per month (or quarter) for Y end users.

That's where the novelty comes in. The usual host-it-yourself software license does not include maintenance or support fees, but most SaaS fees cover support and maintenance. **During the first ASP boomlet from the late 1990s to 2001, many providers had little idea what their own expenses were,** according to Herb Van Hook, an independent industry analyst, and this Business 101 failure hastened their demise when the dot-com frenzy subsided.

Today, by contrast, "Most ASPs have done a better job figuring out their cost structure and business model, so their pricing is much closer to reasonable from the seller's point of view, and there's less room for discounting," Van Hook says.

Also, many enterprise software **vendors are offering hosted versions of their tools at relatively low margins in hopes of overcoming buyers' skepticism.** Unishippers CIO Kevin Lathrop says when his company negotiated with IBM for a hosted version of Seibel's CRM application, IBM was "really aggressive and creative—they were very flexible on a lot of factors."

For these reasons, you probably won't be able to negotiate the massive discounts common in the traditional packaged-software industry, in which list price is generally something of a joke. "With this

[hosted] model, you've got to keep in mind the deep discounts won't be there," Hoch says. According to Van Hook, volume is your most fruitful negotiation point; to lower your cost per seat, add more seats.

Here are some other negotiating tips:

- Differentiate configuration and customization. Be sure your contract spells out what the vendor considers configuration—easily performed changes in the app such as user-interface modifications and frequency of report delivery—and what changes the vendor says are customization. The latter is expensive, while the former should be free or nearly so. If you fail to define this, **your supplier may try to hit you with customization fees** when you ask that the default release be tweaked in any way.

- Look at the provider's stability. It's especially important in an immature field such as SaaS. At some point, consolidation is inevitable. Indeed, Lathrop says two of the vendors Unishippers considered last year have since gone belly-up.

- They have your data. "You need to have an exit strategy," Van Hook says. Be sure to negotiate transition support: how long it will take the provider to return or hand off your data, what notice is required on both sides, and so on.

- Cover all the bases. **A SaaS contract is more an outsourcing deal than a software purchase,** so negotiate accordingly. Get SLAs on availability, response times, notifications of outages and how soon after a failure you must be notified. Other issues you must address: regulatory compliance, data integrity, data privacy, frequency of backup, support and disaster recovery.

- Budget for surprises. Even when you think your bases are covered, you may run into nasty surprises. Unishippers' CIO, Kevin Lathrop, says the "only black eye" he gives IBM's SaaS is **poor monitoring and notification of system health.** Unishippers had to build its own monitoring system, a "totally unanticipated" layer and expense, he says.

—Steve Ulfelder



digit growth for unhosted software. These predicted growth rates have grabbed software vendors' attention, with the result they're tripping over themselves to offer their wares in hosted form.

Someday, maybe, all this technology-from-the-tap will make your job easy. For now, SaaS brings new choices, new factors in your purchasing decisions. What are the benefits and drawbacks of hosted software? What types of applications are good candidates for hosting, and what apps should remain in-house? How do you negotiate the best deal?

Ball of confusion

Although it's appropriate for IT managers and other software decision makers to be skeptical about vendors' claims, experts say the emergence of SaaS truly has the potential to be a winner. "We believe the old software industry is going away, and a new one is being born," says Fred Hoch, vice president of software programs at the Software & Information Industry Association, a Washington, D.C., industry group.

And a confusing industry it is. Here's the cast of characters:

- Traditional enterprise software titans such as Siebel Systems, IBM, Computer Associates and Oracle.
- Emerging SaaS-only powers, with Salesforce.com probably the best known.
- Open-source vendors such as Red Hat.
- A group Hoch calls "hardware companies that are becoming software companies," such as Sun Microsystems and Hewlett-Packard.
- Business-process outsourcing specialists such as payroll giant Automated Data Processing.
- ASPs that host, manage and provide remote access to another vendor's packaged applications. ASP pricing usually includes a one-time license-and-setup fee that's significantly lower than a standard software licensing fee and a recurring subscription fee that

covers hosting and maintenance. US-internetworking and Corio are among the best known.

An odd mix, but the bottom line for software users is that with so many players competing for your business, there's value to be had.

Value proposition in the works

The SaaS value proposition, while very much a work in progress, is compelling—and worthy of investigation for most companies. Leading off the list of benefits is the lower up-front cost. The large fixed cost of the traditional enterprise software implementation, heavily laden with infrastructure and consulting fees, is replaced by a more budget-friendly variable cost.

ASPs charge \$50 to \$100 per user per month for a CRM application, while a typical, installed perpetual license for a large organization costs hundreds of thousands of dollars. That may help explain why customer relationship management has had such rapid uptake of the hosted-software model.

"From a payback perspective, [SaaS] is very attractive compared with the up-

tics' transportation management application. Greg Lutkaskus, Orange Glo's director of logistics, says it was the right call because of the potential payback. "We were right-side up in 120 days," Lutkaskus says.

Reductions in total cost of ownership can be dramatic with hosted products. A recent SHIA report says "first-year TCO can be five to 10 times less expensive than [traditionally purchased] enterprise software, with the majority of savings resulting from the elimination of up-front integration and customization." Dramatic savings like these will be rare for most businesses, according to analysts, but all the SaaS users interviewed for this story say their cost analyses showed hosting to be significantly cheaper than purchase.

Another benefit of the SaaS model is that it offers an easier upgrade path. With traditional software, upgrading tends to be a painful process, demanding many hours of expensive IT staffers' time. With hosted applications, that burden shifts to the vendor. At Orange Glo, LeanLogistics upgrades "continuously happen," Lutkaskus says. Many of the application's improved features be-

Perhaps the greatest area of uncertainty around SaaS is integration.

front costs of a Siebel or Onyx implementation," says Rebecca Wettemann, vice president of research at Wellesley, Mass.-based Nucleus Research. Many experts believe the multimillion-dollar CRM and enterprise resource planning implementations that require three years and heavy consulting are on their way out.

Rapid ROI was a major reason Orange Glo International opted for the SaaS model in logistics software. The Concord, Ont., Canada, maker of cleaning supplies is a J.D. Edwards shop, but last April, it opted to purchase On Demand TMS, the hosted version of LeanLogis-

tic life as suggestions from Orange Glo, he adds. "We come up with ideas, tell [the vendor about them] and next thing you know, they come up in the product."

To some, this kind of rapid-fire upgrade will be unwelcome; even relatively minor changes in an application can throw end users for a loop. So, before committing, you should discuss with potential vendors their upgrade and revision schedules—how often they'll come and what notice they will give you.

Applera, a Norwalk, Conn., life sciences company, has used hosted expense-management software from Concur

Technologies for more than a year and already has been through two upgrades. According to Bob Mendence, Applera's project manager, finance, one month before Concur releases a new version of the app, the company sends end users a notification on their splash screens informing them when the update will

heavily invested in either enterprise software or in a major IT outsourcing contract. Simply firing up a hosted app probably won't be enough for sophisticated global enterprises; they require customization and large-scale integration with other applications and data sources. At this early stage of the SaaS

handled by Unishippers' IT staff, because "you really can't hand that to someone else," Lathrop adds.

Many SaaS providers either open their application programming interfaces or offer hooks into multiple vendors' enterprise applications. When PepsiAmericas, the world's second-largest bottler of PepsiCo drinks, shopped for hosted human resources software, one requirement was it must easily integrate with PepsiAmericas' PeopleSoft ERP app. "We needed to leverage our existing ERP investment as fully as possible," says Dana Sacks, the bottler's vice president of human resources. PepsiAmericas opted for HR applications from Authoria, because the vendor's hosted applications provide predefined extracts for easy data interchange with PeopleSoft.

Other solutions are emerging. Salesforce.com's Sforce platform enables companies to integrate Salesforce.com's CRM app with other vendors' ERP and accounting products. An intriguing new group of startup companies, led by Grand Central Communications, offers "integration on demand" services. However, there's no denying at this early stage integration is a little-understood, and thus risky, part of the SaaS phenomenon.

SaaS is a good option for businesses that lack expertise in a given domain.

occur. A week before the update, "I send out a global reminder to all employees," Mendence says. He adds the process is painless and is done over a weekend.

Where it works best

Although the market is immature, consensus is beginning to build around what conditions make SaaS a strong choice. The size of your company is a good place to start. The ASPs are very strong in the small to medium-sized business segments, says Herb Van Hook, an independent industry analyst. "That's their sweet spot," he adds. SaaS is a good fit for SMBs because it brings them the benefits of big-time enterprise software without the cost.

SaaS also is a good option for businesses that lack expertise in a given domain. For example, a small manufacturer might opt for a hosted supply-chain management application and gain not only a software tool, but also the supply-chain knowledge it needs to grow.

These factors help explain the rapid growth of Salesforce.com; with most of the fiscal, staffing and infrastructure barriers to CRM removed, plenty of SMBs and large enterprises are eager to use the software.

Large enterprises have the infrastructure to purchase, provision and manage weighty applications. Virtually all large businesses already have

phenomenon, customization and integration are wildcards.

Van Hook cites large demand fluctuation as another criterion to consider. "If you're a seasonal business and you host [enterprise apps], you've got to deal with peak demand issues," he says. You must provision servers, bandwidth, staff, disaster recovery and myriad other components with peak loads in mind. With SaaS, on the other hand, "Your provider has that responsibility if your SLAs are negotiated well," Van Hook says.

Tiptoeing around integration

Perhaps the greatest area of uncertainty around SaaS is integration. Integration is perceived as a big problem in large enterprises especially, Hoch says. Many businesses that buy hosted software are tiptoeing around the issue by limiting SaaS to what he calls "edge technologies" that require little interaction with other applications.

Not everybody is scared off by the integration question. In early 2004, Unishippers purchased Siebel CRM from IBM as a SaaS. The company wanted to integrate the Siebel app with its in-house billing system. According to CIO Lathrop, the project differed little from any large-scale integration. "We didn't want two databases, so we made the decision early that all customer attributes would live in Siebel, and that billing would share data," he says. The integration work was

Gaining traction

The acceptance of SaaS means business is rapidly shifting the way it looks at this phenomenon, according to Nucleus Research's Wettemann. "In the CRM space especially, the honeymoon period is ending," she says. "Initially, people were excited just to get rid of expensive CRM." Once the novelty of the delivery method wears off, IT managers will focus on justifying the ongoing expense of SaaS by demanding new functionality and otherwise adding value.

Steve Ulfelder is a freelance technology and automotive writer.

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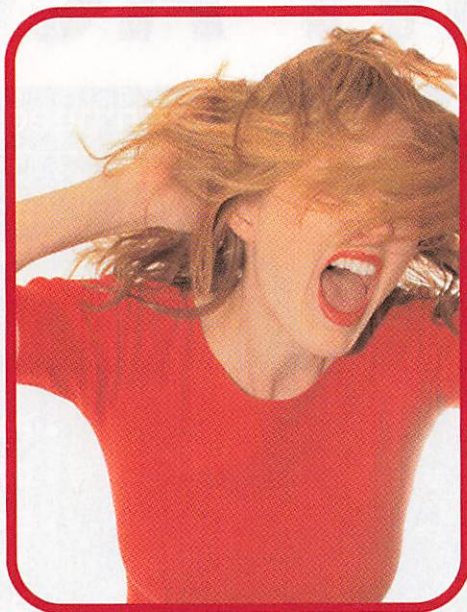
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MANAGING TO COPE WITH PATCHES

Keeping up with a steady stream of patches to close security loopholes and upgrade apps has become time consuming and costly.



BY JOHANNA AMBROSIO

In mid-2003, RKA Petroleum, a distributor in Romulus, Mich., went through hell when one of its most critical servers crashed after IT applied a patch to one of its most critical servers. The company had been using Microsoft's Software Update Services, a rudimentary patch manager, which recommended installing an update for Internet Information Services. However, the patch wound up breaking the server instead of fixing it, according to Jason Hittleman, vice president of information services at RKA.

The IT department found out after the fact the server did not require the patch and because the server did not have sufficient disk space, the patch began deleting files, Hittleman recalls. Services began crashing, and employees couldn't log onto the network.

After 15 hours on the phone with Microsoft, the server was still down and RKA wound up having to rebuild the machine. The firm also learned a valuable lesson, Hittleman says. "It was a wake-up call. We were spending 80 person-hours a month and just barely keeping up with patches. When this happened, we knew there had to be a better way."

As a result, the company investigated third-party software tools and is now using PatchLink's Update. "It saves us \$30,000 each year in personnel time; we got payback in two months," Hittleman says.

Another common need for patching results from what Jim Hurley, an analyst with consultancy Aberdeen Group, calls infrastructure alignment. For example, an enterprise decides to deploy a new router but when it does, the new router breaks an application installed some years ago. It's the kind of thing that happens when a new patch in one app requires an update in another app to work correctly.

Witty was not funny

The security angle looms large, of course. Most companies patch to keep viruses and worms at bay, experts say. The malicious software

PATCH MANAGEMENT

- Viruses and worms are constant risks and patch management is a key defense against security breaches.
- In an ideal world, patch management would be incorporated into security and change-management processes.
- A comprehensive approach to patch management begins with an IT inventory assessment, which is often the most time-consuming part of the job.
- Only about 10 percent of all Fortune 1000 companies have deployed comprehensive patch-management solutions, according to the Yankee Group.

TALKING POINTS

For every little patch you make

A comprehensive patch-management approach needs to start with a complete IT inventory assessment, which can be the most time-consuming piece of the job.

Most patch-management products will tell you when patches are successfully installed. However, **there's no realistic way to determine policies or practices to use patch management tools unless you know where your systems are when you start.** What's the latest release for all your major applications, and where are your systems in relation to it?

Some other advice from the experts:

- For every patch you consider installing—whether with a third-party tool or some other way—**do a risk assessment.** Have a team that's charged with keeping up with patch releases; these folks should be versed in security and systems management issues.
- Questions to ask when doing your risk assessment depend on whether the patch is worth installing. **One key variable is how critical the vendor has determined this patch to be.** Also, is there some exploit or malicious code that's known to be taking advantage of something that's already been patched? Other factors to consider, experts say, include how important the application is to your business operations and whether it's an internal or external (customer-facing) type of system.
- Determine rules and policies that the patch-management system can implement. Do you want to test the patches for a certain amount of time, and then roll them out to everyone? Or do you start with a handful of machines and then later expand the deployment? **What happens if a patch breaks something—what's the procedure for rolling it back?** Who's responsible for overseeing this and communicating with management and end users?
- How will you decide that patches are successful? What are the guidelines you use to verify this?
- **Verify that all systems have actually been updated.** Most patch-management tools have reporting functions, for example, to notify IT when machines have not been rebooted, so the staff can remind end users to do it.

—Johanna Ambrosio

problem is only getting worse—the numbers of viruses and worms released is rising steadily and the time between when a vulnerability is reported and the time rogue programmers release malware designed to exploit is getting shorter all the time.

The Witty worm, for instance, started circulating in March 2004, less than two days after the first public description of a loophole in Internet Security Systems' firewall software. The worm infected as many as 12,000 computers in an hour, according to a report from the Cooperative Association for Internet Data Analysis. The Code Red worm, which hit in January 2003, was even deadlier, CAIDA says, infecting more than 350,000 computers in about 14 hours.

Some software vendors release a steady stream of patches every week, and that exacerbates the problem of keeping up. Some weeks, for example, Microsoft releases as many as five updates. Vendors including Oracle and Microsoft have announced they are moving to quarterly update schedules, but they are in the minority.

The patch problem has gotten out of hand in many enterprises. With, say, even a couple dozen servers and a few hundred desktops, and an average of at least five applications per desktop, the complexity of applying patches escalates rapidly. This is particularly true if there are multiple supported desktop builds for different types of users in various departments, a common scenario in large organizations.

There's one underlying theme to all of these problems, Aberdeen's Hurley says. "Information is not available" because the correct patch versions are not installed. "People don't have what they need to get their jobs done."

Enterprises now look to tackle the problem in a more holistic way. Many find themselves rediscovering the gospel of change management, a staple in the mainframe community that fell out of favor in a Web-focused environment that put a premium on getting an app quickly out the door.

Technology needs an upgrade too

In a perfect world, there would be an IT team of security, development and maintenance experts, responsible for evaluating patches to make sure they are necessary to combat security risks, increase functionality or provide some other benefit. The team would test the patches to make sure they didn't break anything on the production servers.

After a successful test, an automated tool would then push the patch out to all the machines that need it, and a reporting mechanism would attest to how many desktops or servers were successfully updated.

Most important, in this ideal world, patch management would be a piece of two larger processes: layered security and change management. Simply throwing technology at the problem of coping with patches isn't enough, experts say.

The majority of shops are either still patching manually or using Microsoft tools such as Systems Management Server or shareware and freeware. A small number of customers has purchased tools from third parties; at least a dozen are available. (See related story, "On patch patrol, armed with third-party tools," on page 42.)

Phebe Waterfield, an analyst with the Yankee Group, estimates that only about 10 percent of the largest firms have a comprehensive patch-management process. These large companies are the ones

"It's a mark against IT that patch management was so neglected for so long."

that really need a coherent approach because of the scale of the problem in a worldwide and distributed environment.

Still, she believes because of security issues and regulatory oversight in many sectors, the market will thrive. She predicts patch management revenue will grow to \$300 million in 2008, up from \$70 million in 2003. During this time, more customers will come to see patch management is most effectively handled actively and regularly. They will have both best-in-class patch management tools and a structured process for introducing patches into the organization. "Companies really need to apply patches on a scheduled, routine basis and not as a reaction" to a security threat, Waterfield says.

The "key determinant" to a successful patch-management program is "organizational process and not just technology," Aberdeen's Hurley says. It's the proven way to minimize disruption and ensure business continuity, he adds.

Constructing an upgrade strategy

Barton Malow, a construction management firm based in Southfield, Mich., has some 1,300 desktop machines and 80 servers that it plans to convert to Windows 2003, from a base consisting mostly of Windows 2000 and some Windows XP platforms, according to Paul Johnson, chief network engineer.

The company has implemented patch management as part of its inventory, licensing control and other change-management systems, Johnson says. Barton Malow's patch-management tool of choice is a component of the company's suite of Altiris products. Altiris is a systems management vendor whose products compete with Microsoft's SMS.

So, when Altiris came out with a patch manager as part of its product suite, Bar-

ton Malow took a look. Until then, the firm had been using custom Windows scripts to install patches. "It took a lot of manual effort, 40 hours a week, just to keep our systems patched," Johnson says.

Now, when a vendor releases a patch, Barton runs it through its test lab, complete with load simulation tools and benchmarking programs that simulate an app's average usage statistics. "We check there aren't any crashes and odd interactions with the Exchange server and so forth," Johnson says.

If all goes well, Barton deploys the patch to 20 or 30 machines to make sure it works as intended. After four or five hours, if no problems are reported, the patch is distributed to the rest of the machines that need it.

Optimally, patching is done as part of a regular monthly maintenance cycle. That works most of the time, but if a vendor releases a patch to close a security loophole, a customer can opt to install the patch as soon as possible—even during the middle of the workday. "We have to assess the likely cost of ignoring the patch for a day versus the costs of shutting down the network," Johnson says. "I can't think of the last time we had to do that."

Patches in a hurry

Ed Bailey works at the University of Florida in Gainesville as IT director at the college of engineering's department of material science. He's responsible for 400 desktops, and he estimates the PatchLink Update tool has saved the university 500 to 600 manhours. "I can update all the desktops in less than 10 minutes," he says. "Before, I did it manually, and if I did it in a real hurry, I could do it in about a week."

With the department spread out in five buildings on campus, Bailey would walk around to each desktop, install the patch

and reboot the PC—a process that took between 10 and 15 minutes for each machine, assuming the update was trouble free.

"I pay \$9 per computer for a PatchLink license—that's a minimal amount," Bailey says.

Because he works in a university, security is less stringent and access is more open than in the commercial world. "I'd have a different approach in a commercial environment," Bailey says. "Here, our change-management process is more abbreviated than I'd like." For instance, the department's 450 students are allowed to plug personal laptops into the network. "We check out the laptop and register it, and if there are any problems, we turn it off right away," he says. However, the university doesn't mandate which apps must be installed on the laptops.

Just do it

Mark Mellis, a consultant with System-Experts, a security consulting company based in Sudbury, Mass., says he sees organizations applying a variety of patching strategies. "It really does go across

PATCH FACTS

AVERAGE COST OF INSTALLING EACH PATCH MANUALLY:

SOURCE: THE YANKEE GROUP

\$150 \$300
PER DESKTOP PER SERVER

AVERAGE REVENUE LOSS FOR SECURITY INCIDENTS (FOR AN ORGANIZATION OF \$1 BILLION OR MORE IN REVENUE):

SOURCE: ABERDEEN GROUP

\$2 MILLION
PER YEAR

AVERAGE LENGTH OF TIME BETWEEN WHEN A PATCH IS AVAILABLE FROM A VENDOR AND WHEN IT'S INSTALLED BY A CUSTOMER:

SOURCE: THE YANKEE GROUP

52
DAYS

PERCENTAGE OF SECURITY INCIDENTS THAT A PATCH COULD HAVE PREVENTED IF IT HAD BEEN INSTALLED IN TIME:

SOURCE: GARTNER INC.

90%

NUMBER OF CRITICAL UPDATES FROM MICROSOFT DURING 2003 FOR ALL ITS PRODUCTS:

SOURCE: THE YANKEE GROUP

40

the spectrum," he says. One person he knows runs the network at a university and "is doing something really clever. They're not allowed to apply the standard corporate controls—there's no such thing as a standard desktop build—so what she does is [require] you to sign up for BigFix [a third-party software package] to get a ticket to the network."

When a new user signs onto the network, the machine is automatically taken to a Web page where BigFix installs itself on the client PC or laptop and checks to make sure everything is okay. "You can't play on the network unless you're current with all your software," Mellis explains. It's "the most aggressive stance I've seen in this arena," he adds.

In contrast, Mellis says he's worked with a financial institution with 10,000 desktops. This firm uses NetIQ to monitor the patch versions on each desktop, and when required, uses SMS to push the patches.

"Their biggest problem is that the testing cycle for the patches takes a very long time," Mellis says. "They have a change-control process and committee to approve it all, and sometimes the bugs appear before the patch-qualification cycle is done." So the company is inspecting every e-mail and attachment, which emphasizes why it's important to do patch management in the overall context of a layered security approach.

Despite the obvious benefits, it's "not a no-brainer to get started" on the patch-management path, says Carol Baroudi, founder of Baroudi Bloor, a consulting company based in Arlington, Mass. "It's quite complex, and you're in a Catch-22 situation for a while" she says. "Until you get to the point where everything is well defined, it's daunting to get everything into an automated scenario. You need to understand what software is on each client or server, which version it is, what's the critical path for each application on each machine." Patch management, if done correctly, includes identity management, asset management and configuration management, she says.

Even if companies don't do it all at once, end users and consultants say it's critical to do something. "It's a mark against IT that patch management was so neglected for so long," says Barton Malow's Johnson. "There were so many windows of opportunity that we didn't take advantage of. We were very lucky for a long time, and eventually our luck ran out."

Johanna Ambrosio is a freelance writer based in Marlborough, Mass., specializing in technology and business. Contact her at jambrosio@earthlink.net.

ON PATCH PATROL, ARMED WITH THIRD-PARTY TOOLS

If you're ready to go shopping for patch management tools, here are a few things to keep in mind before you begin:

Many vendors sell tools that can do patch management, but those tools aren't necessarily optimized for it. For example, Novell's network management suite ZENworks can push patches around a network, but "it takes time to create and package the patches," says Ed Bailey, an IT director at the University of Florida in Gainesville. The message: Look around your shop to see if something you already have may fit the bill; patch management may be a piece of an application you own.

Make a decision early about whether you're going to go with an agent-based or agent-less product. Both have drawbacks and benefits. Agents can provide much more information about the client being patched.

Agent-less products are generally easier to implement and work with. For enterprises that have deployed wireless or mobile devices or are planning to, agents are the only realistic way to manage them, experts say.

Phebe Waterfield, a security and patch-management expert at the Yankee Group, says many of the packages offer similar functionality, but for her money, PatchLink provides a significant value-add because it tests all patches in its own center to catch any major problems before it makes the patches available to customers.

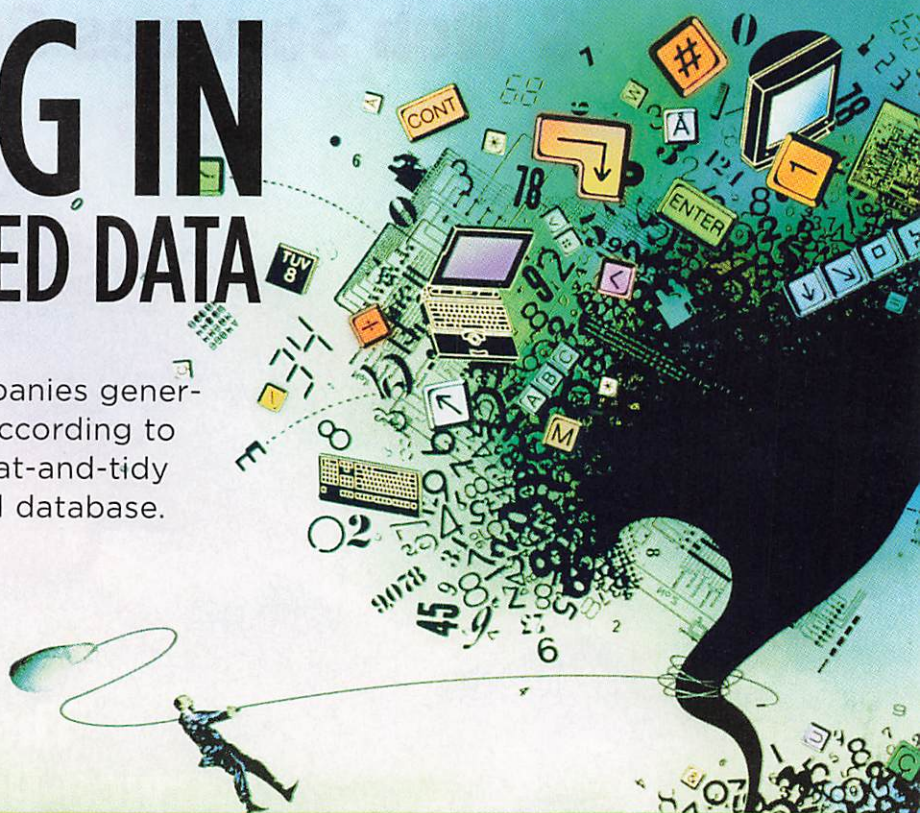
If you're primarily a Microsoft shop, there's some good news for you. Microsoft is providing a more robust patch product, called Windows Update Services, free to customers. It handles patches for Microsoft's products running on servers and networked PCs.

Here's an overview of some major third-party tools:

COMPANY NAME	PRODUCT NAME	WEB ADDRESS
Altiris	Patch Management Solution	www.altiris.com/products/patchmanagement
BigFix	Patch Management for Windows Patch Management for Multiple Environments	www.bigfix.com/products/ products_patch.html
ConfigureSoft	Security Update Manager product_sum_overview.htm	www.configuresoft.com
Ecora	Ecora Patch Manager products/patchmanager.asp	www.ecora.com/ecora
Gravity Storm Software	Security Pack Manager	www.securitybastion.com
PatchLink	PatchLink Update patchlink_update.html	www.patchlink.com/products_services
Shavlik Technologies	Products for different platforms	www.shavlik.com/products.aspx
St. Bernard Software	UpdateExpert	www.stbernard.com/products/ updateexpert/products_updateexpert.asp

REINING IN UNSTRUCTURED DATA

Most of the information companies generate—more than 80 percent, according to experts—won't fit into the neat-and-tidy cells of a traditional relational database.



BY JOHN K. WATERS

Getting a handle on unstructured information has suddenly become a front-burner issue. Just about every company is coping with an explosion of documents, PowerPoint slides, spreadsheets, PDFs, JPEGs, and MPEGs and a constant stream of e-mail messages. Federal regulations, such as Sarbanes-Oxley and HIPAA, have made organizations responsible for the great, scattered piles of information, even though they can't easily manage it. Meanwhile, the ability to exploit unstructured data has turned into a competitive differentiator.

Most of the information companies generate—more than 80 percent, according to experts—won't fit into the neat-and-tidy cells of a traditional relational database. Getting that information under control is no longer an option; making it useful could influence a company's market position. Big-name vendors and important niche players are offering solutions for organizing, integrating, and mining this burgeoning mass of unstructured enterprise content. It's an inherently vexing task, and everybody is just getting started.

"Unstructured content has always been seventh or eighth on the priority list," says Andrew Warzecha, an analyst with META Group, Stamford, Conn. "It moved up when the [tech industry]

bubble burst and people started looking at consolidating systems to cut costs. It shot to the top when regulatory compliance became an issue. The fact that the CEO and the board are now being held accountable for how they manage this information is the reason this is a board-level issue right now."

Most industry watchers agree regulatory compliance has shone a spotlight on the state of unstructured information in the enterprise, and has loosened a few purse strings. However, says Toby

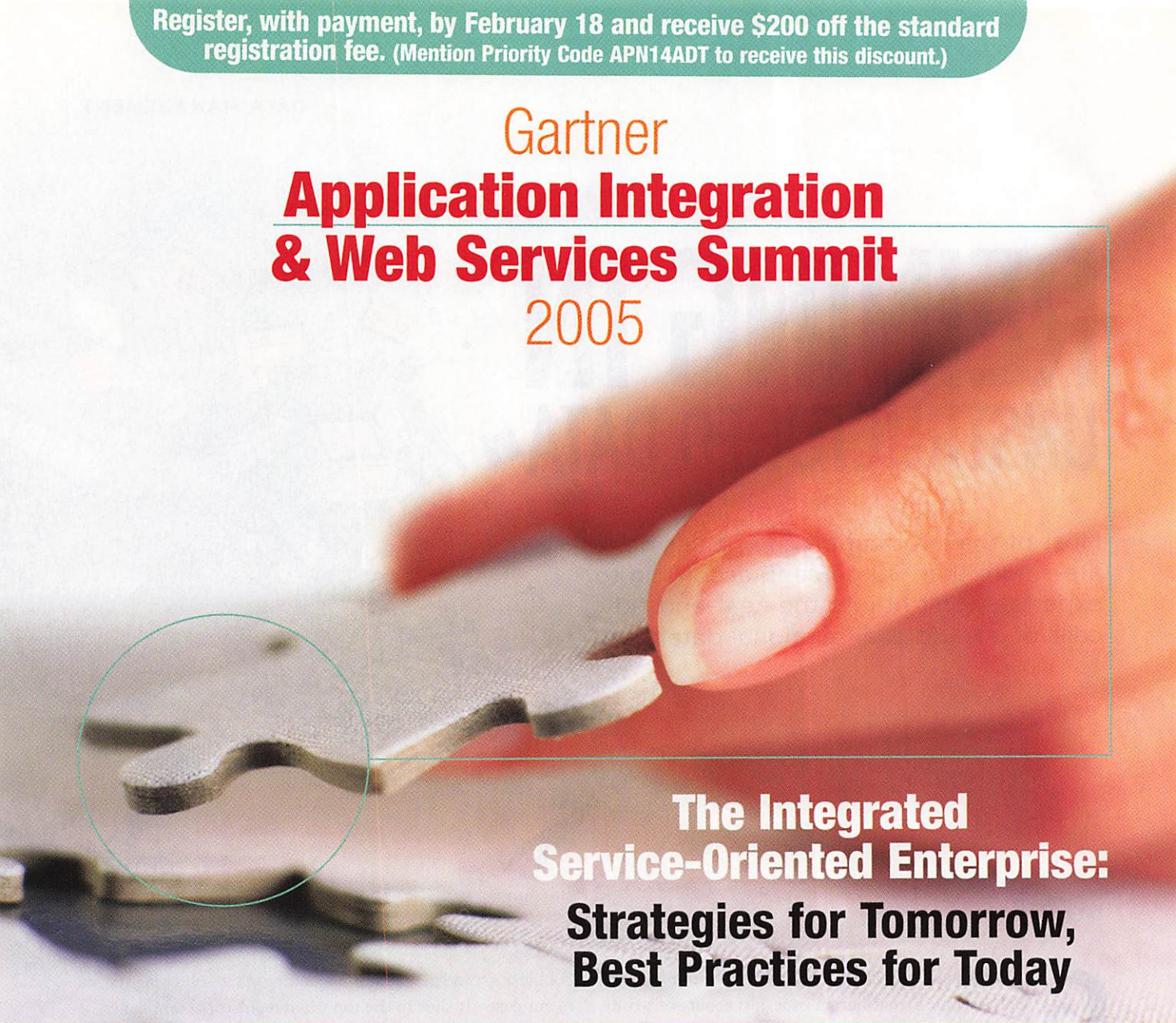
MANAGING UNSTRUCTURED DATA

- By some estimates, the amount of unstructured information in the enterprise doubles every year. Commonly used office productivity suites generate an enormous amount.
- Unstructured data is stuff on your servers that doesn't explicitly specify how it's organized, how it relates to other data, or how it should be used. The two big buckets are bitmap and text objects.
- Letting unstructured information go causes problems. E-mail, in particular, seems to be emerging as a pain point for companies without adequate controls.

TALKING POINTS

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Bell, director in Gartner's Knowledge Workplace, no one should forget compliance is just the first act.

"The natural, early response is to establish better controls on all enterprise content as a response to compliance issues," Bell says. "It's a tactical and pragmatic approach, and companies need to do it, but it's not strategic. Companies also need to begin thinking in a more holistic way about this issue. Most organizations consider compliance to be a cost, but they're not necessarily seeing that if they comply better, they can compete better."

What's structured? What's not?

Definitions are somewhat mutable in this space, but whether you're talking about unstructured data, information, or content, you're essentially referring to the stuff on your servers that does not explicitly specify how it's organized, how it relates to other data, or how it should be used. The two big buckets are bitmap objects, which are inherently non-language based—things like image, video, or audio files; and textual objects, which are based on written language, such as e-mails, spreadsheets, and Microsoft Word docs. META Group applies three categories here:

- Structured information, which fits into database tables;
- Unstructured information, which doesn't; and
- Semi-structured information, which covers XML documents and other self-describing data.

The amount of unstructured and semi-structured information in the enterprise is growing rapidly, doubling every year, by some estimates. Commonly used office productivity suites, such as Microsoft Office and Lotus SmartSuite, generate an enormous amount. A large enterprise is likely to comprise thousands of users generating tens of millions of files. Some productivity suites also include their own smaller databases—Access or FoxPro, for example. With the exception of a few spe-

cialized industries, most IT organizations have tended to leave the management of this type of information in the hands of end users, or, at best, small-unit managers.

Although structured data can be managed with solutions that support querying and reporting against predetermined data types and understood relationships, unstructured information has no conceptual definition or data type definition.

The technology for extracting metadata (such as a name, image format, size, resolution, or creation date) embedded in unstructured files is available, and the tools that digitize such objects are getting better at adding metadata. Document image capture software from companies such as Kofax and Captiva use so-called intelligent character recognition and zonal scanning

techniques to extract additional metadata, such as chapter heads and specifically coded information on paper documents as they are scanned. Vendors including Autonomy, Convera, and Webverse offer technologies for managing and integrating JPEGs, PDFs, and audio files. But the ability to extract meaning from these unstructured objects is still in its infancy.

"Right now, many organizations are just trying to get their arms around how big a problem this is for them," says META's Warzecha. "And to a large extent, they just don't know. We've seen a wide range of companies over the past 12 months going through self-assessments trying to determine how much information in their organization actually is unstructured, what categories that information falls into, and of those categories, which ones they should be formally managing, semi-managing, and not managing at all."

Complexity makes it worse

The fact that companies typically have a number of information systems in place

adds to the challenge. A recent META survey of mid-sized to large enterprises found that about one-third of companies have five systems or fewer, another third had between five and 10, and another third had 10 or more. In paper-intensive industries, such as financial services, insurance, and government, it's common to find more than 20 of these systems within one organization, Warzecha says. He cites a worst-case example of a large multinational insurance company with more than 26 different content-handling systems.

"What's interesting about that situation," he says, "is that those systems were



"Many organizations are just trying to get their arms around how big a problem this is."

doing what they were supposed to. There really wasn't a need to replace any of them for not meeting business requirements. The problem from an IT perspective was that they had to have 26 different administrators checking 26 different servers on a daily basis. They had to have developers that used 26 different API sets. They had to have support personnel that used 26 different environments."

The widespread practice of allowing unstructured information to float around an organization unmanaged seems unwise on its face, and there are many examples of its problem-causing potential. E-mail, in particular, seems to be emerging as a sort of Achilles heel for companies without adequate controls.

"E-mail tends to be riskier than documents," says Rich Buchheim, senior director of product management and enterprise content management strategy at Oracle. "People tend to be more casual about it, and it's ubiquitous. Instant messaging is worse than e-mail. People are extremely casual about that, and the kinds of things that are actually being

communicated through IM are pretty hair-raising.”

“There’s a reason the very first thing a prosecuting attorney goes after these days tends to be e-mail,” says Warzecha. “There’s a whole bunch of stuff that really shouldn’t be in there.”

A user’s story: spurred by a merger

When hard drive maker Western Digital acquired the assets of bankrupt Read-Rite last year, it got more than a warehouse full of hard-drive parts. Read-Rite’s document management system, which was expensive to maintain, would have to be merged with Western’s own aging systems, which it had been on the verge of retiring for months. The acquisition finally got the ball rolling.

Western uses separate document management groups at each of its facilities, including corporate headquarters in Lake Forest, CA, its design facilities in San Jose, and its manufacturing facilities in Malaysia and Thai-

land. Those groups manage a range of files, including manufacturing procedures, assembly instructions for the factories, product instructions, and policies in the forms of text documents, PDF files, and CAD drawings. Each group uses its own content management systems, which include home-grown systems and systems purchased from outside vendors.

“A big issue for us was security,” says Srinivas Ramachandruni, senior programmer specialist at Western Digital. “These are critical documents, and the idea was to get them together in one place so we could apply security policies uniformly, and manage and control the security around them.”

Western also hoped to uniformly implement backup and recovery protocols and procedures. “If you have all of your critical content in one place, you can establish proper backup and recovery,” Ramachandruni says. “Otherwise, you look up one day and you realize that in one corner of the world you have some critical documents that are not properly backed up and hard to restore.”

Western started with a small proof-of-concept project based on Oracle Files, which is a component of the Oracle Collaboration Suite, two Dell 2650 servers, and a Web-based front end. “We wanted to see whether the architecture was robust and whether it could handle this load,” Ramachandruni explains. “When that stabilizes, we will bring other people and other groups onto this single consolidated document management system.”

Western has centralized its Lake Forest, San Jose, and Malaysia documents. The new system is also allowing the company to get away from the tree structure, which Ramachandruni says isn’t very useful when it comes to maintaining and searching unstructured data. “We needed to be able to search based on the text that is stored inside the document,” he says. “No one from IT is required to maintain those documents, and no one needs to be trained on the document management system. The users can do simple searches and get to the documents they want very easily.”

Reining in the data

Beyond the potential for legal liability and other risks, and perhaps a greater concern in the long term, is that most enterprises are not effectively using roughly 80 percent of the information they generate. “If you think about it in terms of a corporate performance framework,”

Bell says, “the idea that most companies have real control over only 20 percent of the intellectual assets of their business, and are making business decisions based on that, is pretty scary. It doesn’t make sense to leave all this valuable content on desktops, file servers, and filing cabinets.”

How do you get a handle on the stuff with no handle? More important, from an enterprise perspective, how do you extract value from these enormous stores of unstructured information?

Before you do anything, says META’s Warzecha, start by answering some fundamental questions about your business:

- What are my core business processes?
- What information is at risk here?
- In what categories should the at-risk information be placed?

• What can I do in the short term to shore up these processes to minimize risk and make sure we’re not fined by a regulatory agency?

Then, make longer-term recommendations about what you can do to automate some of these processes and procedures.

“Short term, it’s about identifying what information is at risk, and making sure that the gaps in your processes are filled on a manual basis and documented,” he says. “Longer term, large organizations should have an initiative under way, led by the CTO, to understand the company’s ongoing risks surrounding their information, and to investigate what types of technologies can best be implemented to automate those same things.”

Ramachandruni’s advice to enterprises is to start small. “We did not want to try to do all of this stuff at one go,” he says. “We started small and we’re scaling up. And we started with one element of our unstructured data. We focused on getting the basic manufacturing documents into one place. Over time, we’ll get it all consolidated.”

John K. Waters is a freelance writer based in Palo Alto, Calif.



“Longer term, large organizations should have an initiative under way.”

land. Those groups manage a range of files, including manufacturing procedures, assembly instructions for the factories, product instructions, and policies in the forms of text documents, PDF files, and CAD drawings. Each group uses its own content management systems, which include home-grown systems and systems purchased from outside vendors.

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Macromedia gives boost to RoboDemo

By L.J. Cohen

Macromedia Captivate

Macromedia

San Francisco

800-470-7211

www.macromedia.com/captivate

RATING: 

might want to build training simulations, assemble e-learning materials, or create demo support movies. I found the Getting Started demos to be a quick way to familiarize myself with the basics of the program.

Basic functions

Captivate's basic functionality is divided into a three-step process: record, edit, and publish. To create a movie, I clicked on Record New Movie, which launches an options box that displays a list of actions: New, Movie from Template, and Menu Builder. Then, I selected New, and Captivate presented me with options for creating a movie from an open application, which causes the recording to resize to the area of the application's window, or from a custom-sized movie, which allowed me to set the movie size and force the demo application to fit the movie dimensions.

If I click the Options button, I can customize the recording process with a number of recording mode options, including:

- Demonstration, which automatically includes captions, highlight boxes, and mouse movements

Review Summary

DESCRIPTION

Macromedia Captivate enables virtually anyone to record on-screen activity to create software demonstrations and interactive simulations in Flash. It allows users to edit content, add media applications, and provide visual screen instructions. It's based on eHelp's RoboDemo desktop recording software.

BOTTOM LINE

A simple-to-use, highly intuitive, full-featured demo-making machine. A must have for anyone who needs to create rich, complex tutorials, simulations, and demonstrations.

SYSTEM REQUIREMENTS

Windows

Macromedia Captivate: Authoring

- 600 MHz Intel Pentium III processor or equivalent
- Windows 2000 or Windows XP
- 128 MB RAM (at least 256 MB recommended)
- 100 MB available disk space
- Minimum resolution 800 x 600 (1024 x 768 or higher recommended)

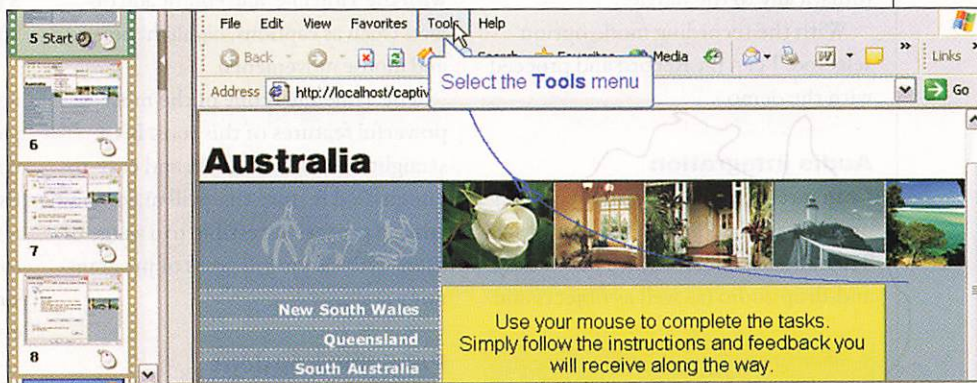
Software and Accessories:

- Publishing and Recording
- Internet Explorer 5.0 or later
- Flash Player 6 or later
- Microphone to record audio
- Speakers and sound card

You might think of Macromedia's newly released Captivate as old wine in new bottles, because it's based on eHelp's popular RoboDemo desktop recording software. However, Macromedia has enhanced Captivate with great new features that add power and ease of use to an already solid tool.

Captivate is designed to enable virtually anyone to record on-screen activity to create software demonstrations and interactive simulations in Flash. The tool allows users to edit content, add media applications, and provide rich, visual screen instructions.

The first thing you notice with this release is how easy it is to use. Clearly, Macromedia has done everything to make this tool accessible to nearly anyone who



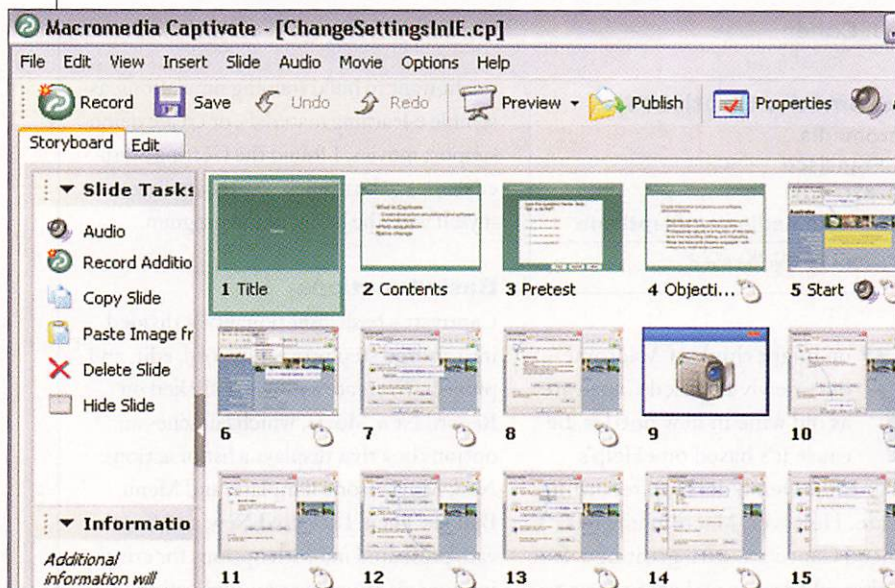
Captivate enables users to record on-screen activity to create software demonstrations and interactive simulations in Flash. The software allows users to edit content, add media applications, and provide rich, visual screen instructions.

PROS:

- Extremely easy to use; virtually no programming skills required.
- Captures windows to the size of the application and of the capture window.
- Powerful Timeline feature allows pinpoint drag-and-drop editing.
- Point and click to add text captions, narration, and other content.
- Publish to multiple formats.

CONS:

- It runs on Windows only.
- Some customers may find it a little pricey.
- Can miss keystrokes during recording if the user types too quickly.



Captivate's basic functionality is divided into a three-step process: record, edit, and publish.

- Simulation, which automatically includes click boxes with a failure caption in the auto recorded movie (but no mouse movements)
- Training, which automatically includes click boxes with hint and failure captions (no captions or mouse movements)
- Custom, which allows me to choose the objects (captions, highlight boxes, click boxes, etc.) to be added automatically to the movie.

With the recording mode option selected, I can hit Record and proceed with the demo.

Audio integration

I can integrate audio during recording or add it while editing. The new Visual Timeline Edit View allows me to drag-and-drop audio (as well as objects and

captions) exactly where I want them in the demo.

Once I have the recording, the Edit View allows me to preview the screen captures as slides or storyboards, much as I would if I were to scroll through a PowerPoint presentation. I can preview a slide, groups of slides, or the entire recording. Edit View allows me to change the order of the slides, add content, adjust the duration of a segment with the Timeline, and edit or add objects (such as captions, highlight boxes and mouse movements).

The Timeline is one of the most powerful features of this tool. It's a straightforward, intuitive, and easy-to-understand feature that will make the editing process accessible to a range of users with varying degrees of programming skills.

Publishing options

Publishing the demo in Captivate is also straightforward. The Publish button gives me access to six output format

options: Macromedia's FlashMX 2004 (SWF), Macromedia Breeze Presentations for online meetings, Stand Alone PC or Mac demos for CD distribution, Microsoft Word for printed training materials, e-mail, and FTP. The default output format is SWF because more than 98 percent of all computers already have Flash Player, according to Macromedia. That's probably true, but it's nice to have the options.

Other standout new features include smart full-motion recording, which eliminates the need to toggle between recording modes, and the audio editing tool, which allows users to edit errors and attach sound effects or narration to individual objects. Captivate also supports key e-learning standards such as SCORM and AICC.

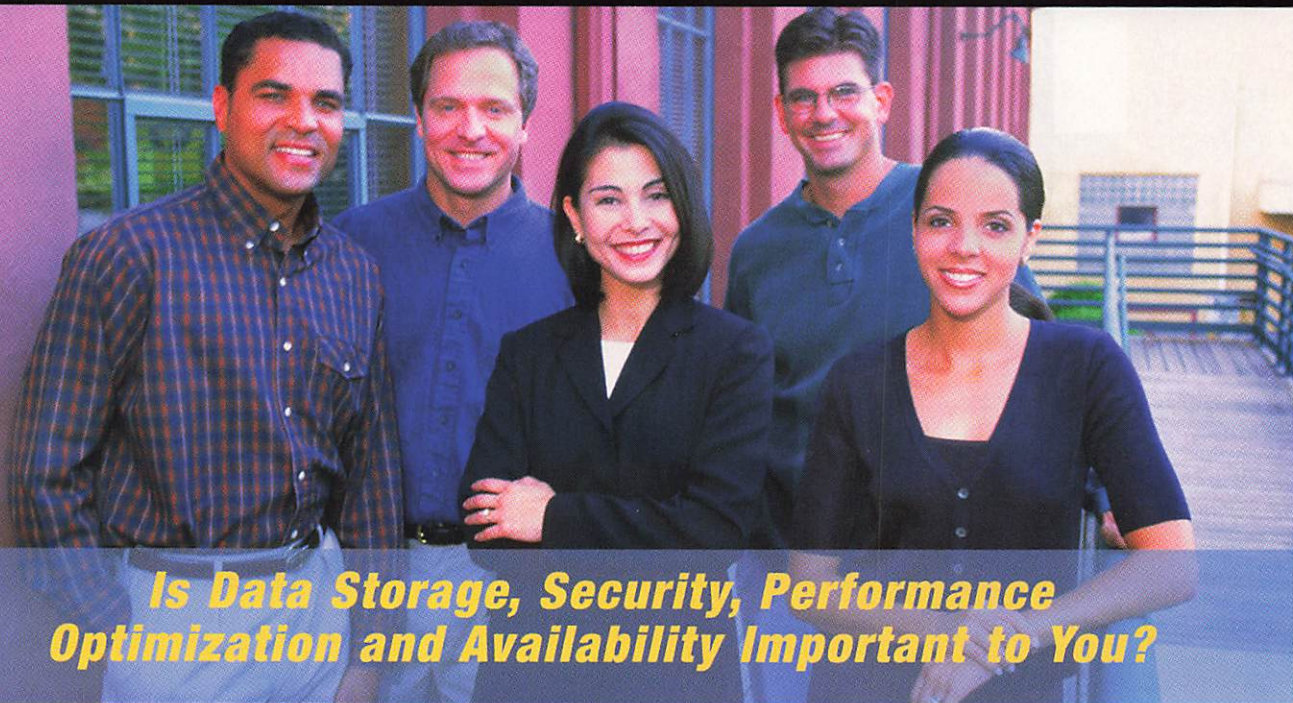
My complaints about the product are nitpicks. It runs on Windows machines only, which, given the Microsoft platform's dominance on the desktop, is a minor limitation, but one that Macromedia will want to correct in upcoming versions. It can miss keystrokes during recording if I type too fast. Maybe I'm a penny-pincher, but the \$500 full-version price tag and \$300 for an upgrade (from RoboDemo 4 and 5) seem a little steep.

There's a lot to like in Captivate, and not much to complain about. It's a simple-to-use, highly intuitive, full-featured demo-making machine. Its ease of use, thoughtful features, and flexibility make it a must for anyone who needs to create rich, complex tutorials, simulations, and demonstrations—even if you're not a programmer. ○

L.J. Cohen is a freelance programmer and Web page design consultant. He can be reached at LJCohen@botmail.com.

Editor's note: Product Reviews are written by software developers ADT hires to give readers an overview of the tools and technologies they use.

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Application Management/Deployment

Xamlon Pro 1.0, an application development package, is composed of an XAML runtime engine and tool set. It equips developers to begin coding in XAML, the XML-based markup language for Microsoft's next-generation operating system scheduled for release in 2006. The XAML runtime engine enables developers to generate and compile XAML files to create deployable .exe files. The product includes tools and converters to allow developers to use the engine in conjunction with common design programs. Xamlon Inc. San Diego, Calif. www.xamlon.com

Clarity 7.5, Niku Corp.'s flagship product for IT management and governance, is a comprehensive solution for federated IT organizations, its manufacturer says.

Its enhancements support global management and governance while allowing visibility into IT service areas that impact total demand for resources. Niku Corporation Redwood City, Calif. www.niku.com

WebRider is built on Linux and operates with enterprise applications.

According to its manufacturer, WebRider optimizes XML, J2EE and .NET environments while increasing performance and scalability of enterprise servers. Developed for industries with intensive computing and data needs, WebRider tracks bandwidth and throughput savings. Web-Rider can be purchased as a software-only solution, or Stampede can install the application on an IBM eServer and ship the integrated software/hardware solution.

Stampede Technologies Inc., Dayton, Ohio www.stampede.com

OpenService has released a new version of its network fault management and real-time correlation technology, **NerveCenter 4.0**. It enables organizations to identify and escalate potentially damaging network and security events as they occur. It features support for Red Hat Enterprise Linux, as well as performance enhancements to NerveCenter's industry-standard PERL extensibility for all supported platforms. OpenService Inc. Westborough, Mass. www.open.com

Data Management

GlobalSCAPE has announced a new release of its **Enhanced File Transfer** solution, an enterprise

software application that manages critical online data exchange processes to protect company information assets from loss, theft or misuse.

The product ensures that encrypted transactions occur only between designated entities and that data integrity and confidentiality are preserved from transport to

release variants and then merge them. Astoria Software Inc. San Mateo, Calif. www.astoriasoftware.com

MicroOLAP has released **DBACentral for MySQL 1.3**, a GUI front-end tool for database administration and data management.

A special version, the DBACentral Run-Time Edi-

LifeKeeper for Linux 4.6

LifeKeeper for Linux 4.6 from SteelEye Technology provides data replication and high availability for enterprise applications in Linux and Windows. The new version supports more Linux distributions and kernels in a wide range of configuration options, according to the company.

LifeKeeper for Linux supports the building of active/active and active/standby data and application high availability configurations of up to 32 nodes. LifeKeeper also supports both shared nothing configurations using data replication and shared storage configurations.

SteelEye Technology Inc., Mountain View, Calif. www.steeleye.com

storage on disk, according to the company.

GlobalSCAPE San Antonio www.globalscape.com

Astoria 4.3 offers enhanced structured document management for distributed workgroups. With it, complex XML documents can be securely authored by access through the Internet.

This upgrade expands support for advanced differencing to automate content updates from third-party sources. Also new is the ability to branch a document to create two

tion, is designed for distribution among end users of the database along with the GUI forms and stored queries developed within the standard edition.

MicroOLAP Technologies LTD Chernogolovka (Scientific Center of the Russian Academy of Sciences) www.micoolap.com

DecisionPoint 11 is available. This financial performance management suite allows companies to see the financial impact of their operations by automatically linking enterprise data from Oracle, People-

Soft, SAP and legacy software into an integrated analytic environment.

The DecisionPoint enterprise data warehouse provides users access to the transaction details behind summary reports. DecisionPoint Software San Mateo, Calif.
www.decisionpointsw.com

OmniPilot has shipped **Lasso Professional Server 8**, a tool for developing, serving and managing data-driven Web applications. The company refers to the new version as a "build once, deploy anywhere" tool.

The upgrade is free to Lasso Professional Alliance members. LP7 users can upgrade for \$349, LP8 users for \$399. New users can purchase LP8 for \$649. OmniPilot Software Inc. Fort Lauderdale, Fla.
www.omnipilot.com

Processes and Practices

Fuego has released a new version of its business process management software. **BPM 5.5** features a business analyst modeling

tool, multi-process simulation, and process dashboards. According to the company, this release enables companies to manage process exceptions and measure effectiveness in achieving process improvement. Fuego, Dallas, Texas
www.fuego.com

Ekahau has created an application software suite for Wi-Fi location tracking. Combined with the company's positioning engine and Wi-Fi tags, the product is called **Ekahau Real Time Location System**. With it, users can pinpoint the location of Wi-Fi-based mobile devices such as laptops, PDAs, and Wi-Fi tags, in real time. Ekahau Inc. Saratoga, Calif.
www.ekahau.com

Forum Sentry Web Services Security Gateway 4.1, from Forum Systems, is available. It has evolved from securing Web services with service-oriented architectures, the company says, to protecting event-driven applications, allowing enterprises to deal with exceptions

and fluctuations in complex asynchronous software services. With this product, enterprises can replace static and hardwired business rules to dynamic and corrective

ing solution, is available. **UC4:global 3.02B** enables organizations to integrate more platforms and applications found in heterogeneous IT environ-



1. **Portal Development Kit for Microsoft .NET in SAP NetWeaver**
Microsoft Corp.
www.microsoft.com
2. **Jetson J2EE Automation Toolset**
DataSource Inc.
www.jetsonj2ee.com
3. **Artesia for Digital Asset Management 6.0**
Open Text Corp.
www.opentext.com
4. **BusinessObjects XI**
Business Objects S.A.
www.businessobjects.com
5. **IBM Dynamic Infrastructure for mySAP Business Suite**
IBM Corp.
www.ibm.com

business rules, according to Forum Systems. Forum Systems Inc. Salt Lake City, Utah
www.forumsys.com

UniPress Software has announced a new version of **FootPrints Asset Management**, which helps admins troubleshoot IT issues. This Web-based asset discovery and tracking system automatically takes snapshots of users' desktops and laptop configurations, capturing the type of operating system and other hardware and software installed. Asset inventory information can be auto-populated into FootPrints tickets for issue resolution. UniPress Software Inc. Edison, N.J.
www.unipress.com

Integration

A new version of UC4:global, a job schedul-

ments, according to UC4 Software, its manufacturer. This release includes an auto forecast function to display tasks scheduled to run within specified time periods, a browser-based interface, and integrated version management for increased transparency. UC4 Software New York City
www.uc4.com

Magic Software has announced **iBolt Business Integration Suite 2**. iBolt includes capabilities for business process management, business activity monitoring, and enterprise application integration. Architects may access iBolt services from the product's studio graphical design interface. iBolt enables simulation and testing of changes to business processes, independent of the actual business or the ongoing integration process. Magic Software

Workgroup Server

Five Across has released its Workgroup Server, which enhances messaging and document security for corporate users. It operates in conjunction with the company's workgroup instant messaging software, InterComm, providing corporations with flexibility for securing instant messaging and improving performance for file sharing and project management activities, according to the company.

Five Across Workgroup Server logs all individual chat conversations centrally to support corporate logging and auditing requirements.

Pricing starts at \$3,490 for a 20-user license.

Five Across Inc., Palo Alto, Calif.
www.fiveacross.com

Review: Microsoft Windows AntiSpyware

Microsoft Windows AntiSpyware (Beta)

Microsoft

Redmond, Washington

www.microsoft.com

RATING: 

Microsoft's latest tool for fighting malware is a credible entrant in a market it helped create. I've taken it for a spin and like most of what I see, despite some rough edges in the beta version.

By Mike Gunderloy

YOU MAY RECALL Microsoft bought anti-spyware vendor GIANT in December. In early January, it came out with a beta of a "Microsoft" anti-spyware tool. I use the quotes because it's clear from the timescale that this is largely, or perhaps entirely, a rebadged copy of GIANT's tool; there's no way Microsoft could grind out a completely new piece of software in that timespan. Be that as it may, it's worth a look now that Redmond has put it out for our consumption.

First, let's clear up a bit of confusion plaguing the not-quite-technical press: "spyware" and "virus" are not synonyms. Microsoft, ironically, made the confusion worse by releasing an antivirus tool the same day as this antispyware tool. Spyware is software, installed without the user's consent, that monitors the user's actions. It might decide to replace banner ads with ads from some other server, intercept requests to buy books from Amazon so as to hijack the affiliate dollars, or do many other nasty things. But it's not designed to spread directly from machine to machine via e-mail or other direct vectors, the distinguishing feature of viruses.

This new tool installs smoothly, though there's a major problem in the way Microsoft has made it available. Following the download link for the beta takes you to a page with this text highlighted: "This download is available to customers running genuine Microsoft Windows. Please click Continue to begin Windows validation." To my mind, customers interested in whacking miscellaneous unwanted junk off their hard drives are among those least likely to be interested in letting Microsoft install an ActiveX control to snoop around those very same hard drives in search of evidence of dishonesty. It turns out that you can bypass

this, but it's not obvious how (Tell it to begin the validation, and then tell it no, you've changed your mind.). **Microsoft really needs to rethink the intersection between its security efforts and its anti-piracy efforts.**

The software lets you make a number of decisions when you install it. You can decide whether to install security agents that monitor vital parts of your system to detect changes to the system and warn you about them, whether to update your spyware definitions on a regular basis, and whether to participate in the SpyNet community, which lets you send information collected by the security agents back to Microsoft for comparison with reports from other users. I'm glad to see that these things are optional; I personally don't care to load up yet more agents in my computer's RAM. I'm not so glad that the program warns me that some of these choices are critically dangerous every time I start it up. Let me decide and then leave me alone, OK? Even worse: just looking at the options page for the agents turns the agents back on, unless you manually turn them off again. Bad UI design.

The heart of the program is the ability to scan your hard drive and RAM for threats. This part works well and quickly, though you need to exercise caution with the results; at least in this beta, there are some false positives. For example, on Windows 2003 the file `tapicfg.exe` is detected as a high-risk browser hijacker, when in fact it's part of the system. Several comparative tests have shown that the GIANT product detected more threats than its competition; I wonder whether they do this by being a bit less conservative in what they identify as a threat? Microsoft may have to ease off on this to

make the tool foolproof for the general audience. Detected threats can be easily removed, and the product keeps track of what it did for reporting and possible reversal.

There are also some interesting tools included in the product. The Browser Hijack Restore tool will let you reset changes to IE's settings back to their defaults (or back to defaults that you choose); this is an easy way to fix the effects of much spyware, at least if you use IE as your browser. The Tracks Eraser will get rid of things like your browser history and forms passwords. Finally, the System Explorers will let you look at things like running processes, IE BHO's, and shell execute hooks—information that power users can collect elsewhere, but it's nice to have them all in one place.

Do you need this product? It really depends on your browsing habits. If you're careful what sites you visit, sensible about what you click on, or (even better) use a non-IE browser, probably not—though you might want to download a copy to have on hand just in case. On the other hand, the average user will probably benefit quite a bit from the monitoring and scrubbing functions here; I'm going to suggest it to a selected group of friends and relatives.

Finally, I do have to note the irony involved in Microsoft's buying this product and then rushing its own version out: **Were it not for the notoriously flawed Internet Explorer and some of Microsoft's own**

architectural decisions, this product wouldn't be needed at all. It's as if your home builder put screens with rips in them over all the windows, and then gave you flyswatters for free when the bugs got in. Better to repair the screens—though in the real world, flyswatters will remain necessary so long as the flies remain clever. 

Mike Gunderloy, MCSE, MCSD .NET, MCDBA is an independent software consultant and author working in Washington state.



Enterprises

Or-Yehuda, Israel

www.magicsoftware.com

Bowstreet has introduced **Bowstreet Enterprise Portal Solutions**, a set of portal-based composite applications. The first suite of the set is the Workforce Management Suite, which includes employee and manager self-service applications for IBM WebSphere Portal and Workplace. The solutions come with pre-packaged portlets, browser-based configuration tools, and Portlet Factory technology that allows users to modify the suite to meet business requirements. Enterprise Portal Solutions also ships with wizard-driven connectors that automate the process of pointing portlets at multiple data sources. Bowstreet Inc. Tewksbury, Mass. www.bowstreet.com

Integrity PC enables the incorporation of legacy applications and traditional operating systems into high-security and high-reliability applications, according to its manufacturer, Green Hills Software. Integrity PC integrates the Integrity Real-Time Operating Systems with new Padded Cell secure virtualization technology, which implements a virtual computer in a user-mode application running on top of the Integrity operating system. Multiple Padded Cell

applications can run concurrently on one computer, each hosting its own guest operating system.

Green Hills Software's Integrity tool allows users to graphically configure a system's security.

With Integrity PC, multiple instances of the same or different operating systems can run concurrently in different virtual computers. No re-compilation is needed for guest operating systems to run with existing applications.

Green Hills Software Inc. Santa Barbara, Calif. www.greenhillsoftware.com

Tools and Technologies

Network Director RM offers reliable messaging, prioritized, guaranteed delivery, and asynchronous messaging to the services network, adding reliable queuing and WS-Reliable-Messaging support, according to Blue Titan. The product comes with embedded queues. Blue Titan Software Inc. San Francisco, Calif. www.bluetitan.com

Compuware has announced two new products. **DevPartner Fault Simulator** emulates real-world application and environment errors to help application life cycle professionals debug their applications' reactions to errors. **DevPartner SecurityChecker** provides application security vulnerability analysis to

ManageEngine WiFi Manager 4

AdventNet has announced ManageEngine WiFi Manager 4, a WLAN management solution that enables IT teams to offer mobile users the benefits of Wi-Fi technology while reducing the associated security risks and administrative workloads. WiFi Manager 4 identifies more than 40 types of security threats including rogue access points, attacks, and vulnerabilities in wireless networks, according to the company.

WiFi Manager enables IT administrators to manage large wireless networks from a Web-based user interface. It monitors the health and availability of access points, mobile clients, switches, routers, servers, and desktops. Built-in reports provide information on security, usage, and performance.

AdventNet Inc., Pleasanton, Calif. www.adventnet.com

enable developers to quickly locate and fix security vulnerabilities in ASP.NET applications. Compuware Corporation Detroit, Mich. www.compuware.com

Quest Spotlight on Exchange 5.0, a diagnostic and problem resolution product for Exchange, is available. Features include real-time tests that can be scheduled to run based on organizational needs, message-flow views to help administrators identify over- and underutilized servers or routing bottlenecks, and data collection, which allows administrators to apply specific counters to problem servers. You can download the software from the Web site. Quest Software Inc. Irvine, Calif. www.quest.com

LANDesk Security Suite is designed to defend against such threats as spyware, malware, worms and unauthorized access. The solution features

patch management capabilities, unwanted application blocking, and a Connection Control Manager to limit the networks a client can access. It can also verify lists of authorized connections, and enable or disable USB ports, modems, drives, ports, or wireless access.

LANDesk Software Salt Lake City, Utah www.landesk.com

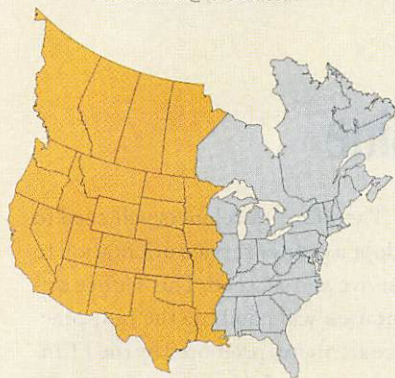
extend 6.2 offers support for .NET and external sort modules. It also includes thin-client technology to enable developers to provide Web access to their applications. With the thin client, developers can either embed an application within a browser page or execute it outside the browser. The latter gives developers the option of deploying thin client apps on the Internet without rewriting or re-compiling them, according to Acucorp. Acucorp Inc. San Diego, Calif. www.acucorp.com

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Erica Cormier

Sales & Marketing Associate

508-875-6644, ext. 31 Phone 508-875-6633 Fax
ecormier@101com.com

Production Kelly Smith

Associate Production Coordinator

818-734-1520 Ext. 164 Phone 818-734-1528 Fax
adadproduction@101com.com

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As enterprises discover value in utility computing, application developers must shift their focus to service if they are to survive.

Utility computing throttles app dev's value

On-demand, utility computing has drawn considerable attention and spawned much debate. Although it's hard to argue about its theoretical benefits, many application developers refuse to believe utility computing will become a reality, and thus downplay the implications it could have on development.

However, enterprise executives and end users are already embracing the concept and adopting early iterations of utility computing. For instance, they're increasingly subscribing to software services such as Salesforce.com and managed security offerings.

Purists might suggest these subscription services are far from the elaborate, virtualized data center-oriented architectures that are necessary to support more powerful utility computing environments. For enterprise executives and end users, these on-demand subscription services represent practical, first-generation utility computing solutions that satisfy day-to-day business needs more effectively than traditional products.

Anyone who thinks Salesforce.com is a simple application that can't scale, or a flash-in-the-pan solution for small and medium businesses, isn't paying attention to the company's growth. In the past year, Salesforce.com has experienced an 80 percent-plus increase in subscribers

and even greater revenue growth. This growth isn't coming at just the low end of the market, nor is it the result of giving away its service to gain market share. Salesforce.com is also quickly gaining acceptance in large-scale enterprises and generating healthy profits.

Salesforce.com's success is also directly responsible for Siebel, PeopleSoft, Oracle and SAP adding on-demand, hosted services to their shrink-wrapped software portfolios. These major players are jumping on the subscription service bandwagon to resuscitate sales after experiencing a severe decline in demand for their traditional CRM, SFA and ERP products, which enterprises are happy to abandon after spending millions of dollars deploying them unsuccessfully.

The net result is that utility computing compounds the growing preference to buy, rather than build, important enterprise apps. Instead of continuing to invest in application development skills to develop proprietary programs, or customize already complex apps, executives and end users are willing to accept simpler software service solutions that satisfy basic business needs.

Growing interest in utility computing is the next step toward the commodization of IT and application development. As the offshoring of software jobs demonstrates, expert app dev skills are becoming a commodity. However, that doesn't mean the development process has lost its value. Instead, app dev will shift its focus toward how IT can be designed and delivered as an on-demand service to meet business objectives.

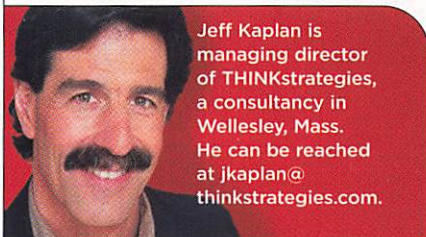
Therefore, developers will need to adopt a greater service orientation to survive and succeed. This service orientation will combine the best-practice attributes promoted by the IT Infrastructure Library and the latest Web-based, app dev tools such as XML and Web services. The ITIL framework looks at the deployment of IT systems and software applications in terms of six service management stages:

1. Service creation
2. Provisioning
3. Monitoring
4. Problem resolution
5. Reporting
6. Billing

For application developers to remain relevant in the brave, new world of utility computing, they will have to follow the framework, which means using their project management and relationship management skills to better understand executive and end-user requirements and preferences so they can design applications that are easier to access and use.

To keep pace with these changing expectations, developers will also have to design applications that can be deployed more flexibly. IT will need to monitor and manage the applications more effectively to assure greater reliability, and meter and measure their use so enterprises can allocate costs based on how they use them.

The movement toward utility computing is real, and application developers will need to board the train before it leaves the station. 



Jeff Kaplan is managing director of THINKstrategies, a consultancy in Wellesley, Mass. He can be reached at jkaplan@thinkstrategies.com.

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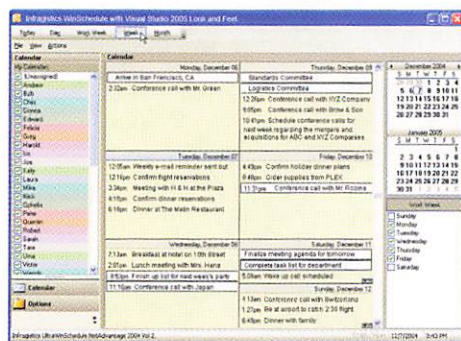
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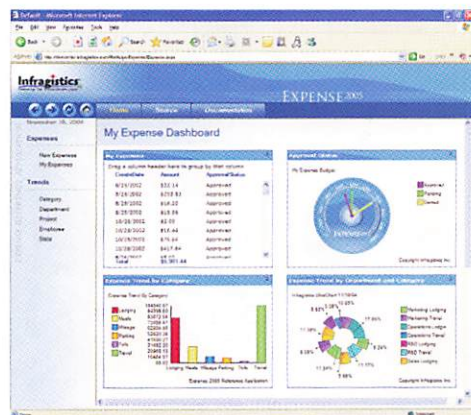
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